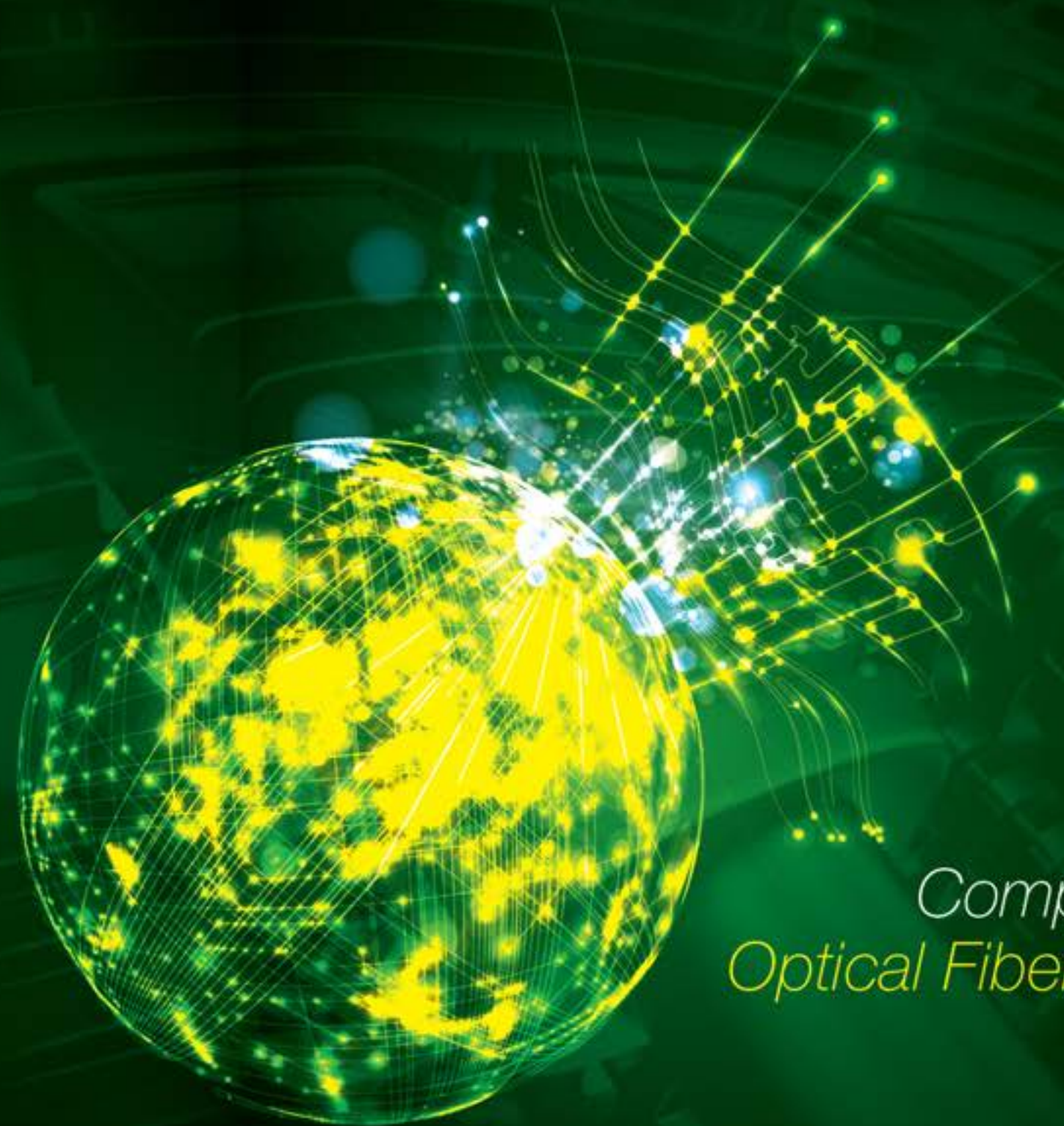




*Comprehensive
Optical Fiber Solutions*

For more information, please visit us at www.u-net.com.my

VITAWATERMIN SDN BHD (832747-T)

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Vitawatermin Sdn. Bhd. (A subsidiary company of U-Net Sdn. Bhd.) offers optical fiber solutions and assemblies with a combined experience of more than 5 years. Our goal is to present information to our customers about connectivity solutions such as SAN, LAN, WAN, MAN and general network connectivity in order to find the best fiber optics solution that provides the most value to each end user.

*a world's most reliable and
technologically advanced
optical fiber solutions*

Products & Solutions

Fiber-To-The-Home (FTTH) Solutions,
Fiber Optic Cables,
Optical Cable Assemblies
Fiber Connectors, Adapters & Accessories
Fiber Optic Enclosures
Fiber Management Systems
Fiber Optic Converters & Testers

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FTTH Installation Guide

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EVERNEW **U-N**



INDOOR OPTICAL FIBER CABLE

Cable Design

- Optical fiber
- Tight buffer
- Aramid yarn
- Strength member
- Outer sheath

Features

- Choice of fiber type
- Choice of outer diameter
- High strength aramid yarn strength member
- Easy to strip
- Choice of outer sheath material
- Choice of outer sheath colour

Main Applications

Building to building interconnection; indoor; distribution; pigtails for instrument-type communication equipment, as a moveable connect line for patchcords and connectors.

Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C + 60°C

Technical Characteristics

SIMPLEX OPTICAL FIBER CABLE						
Outer diameter	mm	1.6	1.8	2.0	2.4	3.0
Normal weight	kg/km	2.6	3.0	3.5	5.0	6.8
Long term tensile strength	n	40	40	60	60	80
Short term tensile strength	n	80	80	100	100	150
Minimum static bending radius				10D		
Minimum dynamic bending radius				20D		
Long term crush resistance	N			500		
Short term crush resistance	N			100		

Simplex Optical Fiber Cable



Duplex Optical Fiber Cable



DUPLEX OPTICAL FIBER CABLE						
Outer diameter	mm	1.6x3.3	1.8x3.7	2.0x4.1	2.8x5.7	
Normal weight	kg/km	5.7	6.7	8.2	13.2	
Long term tensile strength	n	40	40	60	60	
Short term tensile strength	n	160	160	200	300	
Minimum static bending radius				10H		
Minimum dynamic bending radius				20H		
Long term crush resistance	N			500		
Short term crush resistance	N			100		

VT-CORD

Cable Type	Cable Diameter (mm)	Fiber Type	Outer Sheath Material	Outer Sheath Colour
SI=Simplex	16=1.6	62=62.5/125	LZ=LSZH	OR=orange
DU=Duplex	18=1.8	50=50/125	PV=PVC	PR=purple
	20=2.0	09=9/125		YE=yellow
	24=2.4	OM3=OM3		XX=colour
	28=2.8	OM4=OM4		
	30=3.0	7A=G657A		
		7B=G657B		

Marking: As required.
Packing: Standard 2000m or as required.

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any colour of cable jacket
- OFNP plenum jacket

INDOOR OPTICAL FIBER CABLE

Cable Design

- Optical fiber
- Tight buffer
- Aramid yarn strength member
- Inner sheath
- Outer sheath

Features

- Choice of fiber type
- Choice of outer diameter
- High strength aramid yarn strength member
- Easy to strip
- Choice of outer sheath material
- Choice of outer sheath colour

Main Applications

Indoor horizontal and vertical laying, direct connection to outdoor cable. As pigtails for communication equipment and cable for patchcords and connectors.

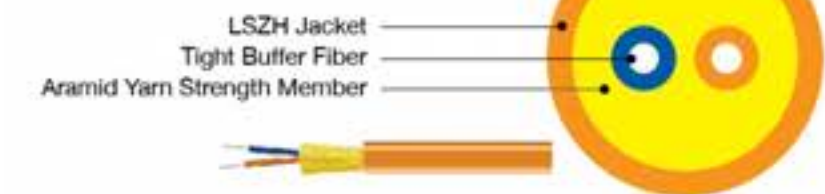
Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C + 60°C

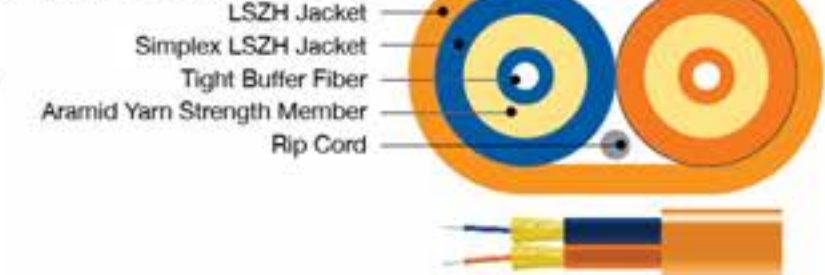
Technical Characteristics

ROUND DUPLEX OPTICAL FIBER CABLE			
Outer diameter	mm	3.0	5.0
Normal weight	kg/km	7.6	19.0
Long term tensile strength	n	40	160
Short term tensile strength	n	80	80
Minimum static bending radius		10D	
Minimum dynamic bending radius		20D	
Long term crush resistance	N	500	
Short term crush resistance	N	100	

Round Duplex Optical Fiber Cable



Flat Duplex Optical Fiber Cable



FLAT DUPLEX OPTICAL FIBER CABLE			
Outer diameter	mm	3.0x5.0	3.8x6.6
Tight buffer diameter	µm	900±50	
Subunit simplex diameter	mm	2.0±0.1	2.8±0.1
Normal weight	kg/km	18	31
Long term tensile strength	n	120	120
Short term tensile strength	n	250	250
Minimum static bending radius		10D	
Minimum dynamic bending radius		20D	
Long term crush resistance	N	500	
Short term crush resistance	N	100	

VT-CORD

Cable Type	Cable Diameter (mm)	Fiber Type	Outer Sheath Material	Outer Sheath Colour
FL= Flat	30=3.0	62=62.5/125	LZ=LSZH	OR=orange
RO=Round	38=3.8	50=50/125	PV=PVC	PR=purple
	50=5.0	09=9/125		YE=yellow
		OM3=OM3		XX=colour
		OM4=OM4		
		7A=G657A		
		7B=G657B		

Marking: As required.
Packing: Standard 2000m or as required.

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any colour of cable jacket
- OFNP plenum jacket

INDOOR OPTICAL FIBER CABLE

Cable Design

- Optical fiber
- Tight buffer
- Aramid yarn strength member
- Outer sheath

Features

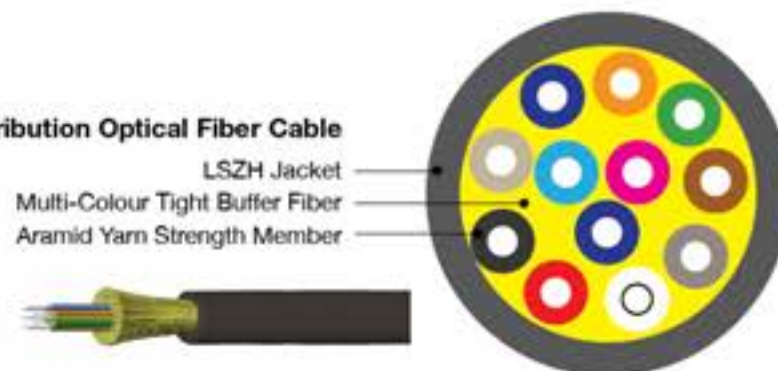
- Choice of fiber type
- Choice of outer diameter
- High strength aramid yarn strength member
- Easy to strip
- Choice of outer sheath material
- Choice of outer sheath colour

Main Applications

As connecting cables between buildings; as connecting cable along wall, ceiling, layers and tubes; as pigtailed for communication equipment; as moveable connecting cables and patchcords.

Distribution Optical Fiber Cable

LSZH Jacket
Multi-Colour Tight Buffer Fiber
Aramid Yarn Strength Member



Temperature characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C + 60°C

Technical Characteristics

DISTRIBUTION OPTICAL FIBER CABLE							
Fiber core	mm	4	6	8	12	16	24
Normal weight	kg/km	19	23	29	33	53	60
Outer diameter	mm	4.6	5.0	6.2	6.8	7.4	8.4
Normal drum dimensions	mm	630	630	760	760	760	900
Drum weight	kg/pcs	25	25	25	33	33	54
Long term tensile strength	n	300	400	500	600	800	1200
Short term tensile strength	n	500	600	800	1100	1500	2000
Minimum static bending radius		100					
Minimum dynamic bending radius		200					
Short term crush resistance	N	1000					
Long term crush resistance	N	300					

VT-DIST

Fiber Core	Fiber Type	Outer Sheath Material	Outer Sheath Colour
4	62=62.5/125	LZ=LSZH	OR=orange
6	50=50/125	PV=PVC	PR=purple
8	09=9/125		YE=yellow
12	OM3=OM3		XX=colour
16	OM4=OM4		
24	7A=G657A		
	7B=G657B		

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any colour of cable jacket
- OFNP plenum jacket

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

INDOOR OPTICAL FIBER CABLE

Cable Design

- Simplex cable
- FRP strength member
- Water blocking tape
- Outer sheath

Features

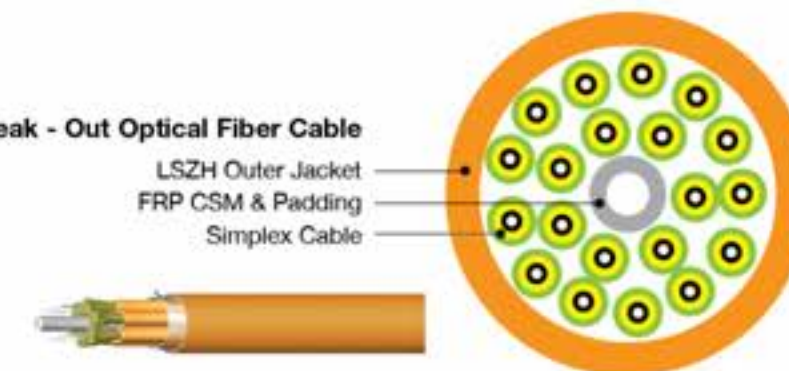
- Choice of fiber type
- Individual aramid yarn strength members
- Easy to use
- Lightweight and compact
- Choice of outer sheath material
- Choice of outer sheath colour

Main Applications

Internal break-out cable
for horizontal distribution

Break - Out Optical Fiber Cable

LSZH Outer Jacket
FRP CSM & Padding
Simplex Cable



Temperature characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C + 60°C

Technical Characteristics

FIBER NUMBER	OD	CABLE WEIGHT	DRUM DIMENSIONS	DRUM WEIGHT	MIN. BEND RADIUS		MAX. TENSION (N)	
	mm	kg/km	mm	kg/pcs	Static	Dynamic	Short Terms	Long Terms
4	7.2	54	800	43	10D	20D	500	270
6	8.3	75	900	54			1000	600
8	9.4	100	900	54			1100	700
12	12.2	170	1100	76			1400	800
24	15.6	230	1300	108			2300	1100

VT-BREAK

Fiber Core	Fiber Type	Outer Sheath Material	Outer Sheath Colour
4	62=62.5/125	LZ=LSZH	OR=orange
6	50=50/125	PV=PVC	PR=purple
8	09=9/125		YE=yellow
12	OM3=OM3		XX=colour
16	OM4=OM4		
24	7A=G657A		
	7B=G657B		

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any colour of cable jacket
- OFNP plenum jacket

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

INDOOR/OUTDOOR OPTICAL FIBER CABLE

Cable Design

- Optical fiber
- FRP Strength member
- Fiber jelly
- Aramid yarn or E-glass strength member
- Loose tube
- Outer sheath

Features

- Choice of fiber type
- Colour code of fiber
- Choice of outer sheath material

Main Applications

Suitable for internal or external applications in ducts or intra-building links in campus environments.

Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C to + 60°C

Technical Characteristics

FIBER NUMBER	OD	CABLE WEIGHT	DRUM DIMENSIONS	DRUM WEIGHT	MIN. BEND RADIUS		MAX. TENSION (N)		CRUSH LOADING (N/100MM)	
	mm	kg/km	mm	kg/pcs	Static	Dynamic	Long Terms	Short Terms	Long Terms	Short Terms
4	6.5	35	800	43	10xD	20xD	500	1000	300	1000
6	6.5	35	800	43						
8	6.5	35	800	43						
12	6.5	35	800	43						
24	12.4	150	1100	76						
36	12.4	150	1100	76						
48	12.4	150	1100	76	600	1500	300	1000		
72	14.0	200	1200	94						
96	14.0	200	1200	94						
144	17.8	250	1400	158						

Fiber Core	Fiber Type	Outer Sheath Material
4 36	62=62.5/125	LZ=LSZH
6 48	50=50/125	PV=PVC
8 72	09=9/125	
12 96	OM3=OM3	
24 144	OM4=OM4	
	7A=G657A	
	7B=G657B	

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

OUTDOOR OPTICAL FIBER CABLE

Cable Design

- Optical fiber
- Jelly filled
- Fiber jelly
- Steel tape
- Loose tube
- Outer sheath
- Steel wire strength member

Features

- Choice of fiber type
- Colour code of fiber
- High water resistance
- PE outer sheath

Main Applications

Suitable for external applications in ducts.

Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C to + 60°C

Technical Characteristics

FIBER NUMBER	OD	CABLE WEIGHT	DRUM DIMENSIONS	DRUM WEIGHT	MIN. BEND RADIUS		MAX. TENSION (N)		CRUSH LOADING (N/100MM)	
	mm	kg/km	mm	kg/pcs	Static	Dynamic	Long Terms	Short Terms	Long Terms	Short Terms
4	10.1	105	900	54	10XD	20XD	600	1500	1000	3000
8	10.1	105	900	54						
12	10.1	105	900	54						
16	10.1	105	900	54						
24	10.6	105	900	54						
36	11.1	116	1000	67						
48	11.4	135	1000	67						
72	11.9	160	1100	76						
96	12.9	170	1100	95						
144	16.3	260	1300	108						
256	18.7	295	1400	158						

Fiber Core	Fiber Type	Outer Sheath Material
4 48	62=62.5/125	LZ=LSZH
8 72	50=50/125	PV=PVC
12 96	09=9/125	
16 144	OM3=OM3	
24 256	OM4=OM4	
36	7A=G657A	
	7B=G657B	

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

AERIAL FIBER CABLE

Cable Design

- Optical fiber
- Fiber jelly
- Loose tube
- Steel wire strength member
- Jelly filling
- Al/PET tape
- Outer sheath
- Steel messenger wire

Features

- Choice of fiber type
- Colour coded of fiber
- High water resistance
- Self supporting
- PE outer sheath

Main Applications

The figure of 8 cables are suitable for the installation in aerial environments

Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -20°C + 60°C

Technical Characteristics

FIBER NUMBER	OD	CABLE WEIGHT	DRUM DIMENSIONS	DRUM WEIGHT	MIN. BEND RADIUS		MAX. TENSION (N)		CRUSH LOADING (N/100MM)	
					Static	Dynamic	Long Terms	Short Terms	Long Terms	Short Terms
4	9.8x18.8	210	1100	76	10XD	20XD	3500	7000	1000	2000
8	9.8x18.8	210	1100	76						
12	9.8x18.8	210	1100	76						
16	9.8x18.8	210	1100	76						
24	10.2x19.3	230	1100	76						
36	10.2x19.3	116	1100	76						
48	10.7x19.7	230	1100	76						
72	11.3x20.3	255	1200	94						
96	12.9x21.9	350	1300	108						
144	16.3x22.7	390	1400	158						

VT-GYTC8S

Fiber Core	Fiber Type
4	48
8	72
12	96
16	144
24	256
36	
	62=62.5/125
	50=50/125
	09=9/125
	OM3=OM3
	OM4=OM4
	7A=G657A
	7B=G657B

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

FTTH DROP FIBER CABLE

The Optical Fiber unit is positioned in the center. Two parallel steel or FRP wires are placed at the two sides. Then, the cable is completed with a black or other colored LSZH sheath. Most suitable for floor routing.

Features

- Choice of fiber type
- Individually coloured optical fibers
- Notched construction for easy stripping
- White LSZH jacket for internal use.

Main Applications

As FTTH cable, for indoor horizontal and vertical cabling; Indoor cabling under carpet and along corner.

Temperature Characteristics

Operating temperature range : -20°C to + 60°C
Storage temperature range : -40 °C + 60°C

Technical Characteristics

FIBER NUMBER	OD	CABLE WEIGHT	MIN. BEND RADIUS		MAX. TENSION (N)		CRUSH LOADING (N/100MM)	
			Static	Dynamic	Long Terms	Short Terms	Long Terms	Short Terms
1	(2.0±0.2)x(3.0±0.2)	8	15mm	30mm	30	100	1000	300
2	(2.0±0.2)x(3.0±0.2)	8.5						
4	(2.0±0.2)x(4.0±0.2)	11						
6	(2.0±0.2)x(4.5±0.2)	13						
8	(2.5±0.2)x(4.0±0.2)	14						

VT-FTTH

Fiber Core	Fiber Type	Fiber Unit	Strength Member	Jacket Colour
1	62=62.5/125	Q=Fiber	F=FRP	K=Black
2	50=50/125	J=Tight buffer Fiber	S=Steel Wire	O=Orange
4	09=9/125	D=Ribbon		W=White
6	OM3=OM3			
8	OM4=OM4			
	7A=G657A			
	7B=G657B			

Marking: As required. Packing: Standard 2000m or as required.
The drum weight does not include the wood battens around the drum.

Outdoor FDH



Outdoor FDH
FDH 72 Port

VT-NGFM-FDH-72X



Outdoor FDH
FDH 144 Port

VT-NGFM-FDH-144X



Outdoor FDH
FDH 288 Port

VT-NGFM-FDH-288X



Outdoor FDH
FDH 576 Port

VT-NGFM-FDH-576X



Outdoor FDH
FDH 600 Port

VT-NGFM-FDH-600X

Indoor FDH



Indoor FDH

VT-FTDS-CAB



Indoor FDH

VT-FTDS-CAB-9030



Outdoor Subscriber
Distribution Box 8 Port

VT-FTH-SDB-08



Outdoor Subscriber
Distribution Box 16 Port

VT-FTH-SDB-16



WFPN Wall Mount Fiber
Splitter Distribution Box

VT-WFPN-XX



RFPN Rack Mount
Splitter Panel

VT-RFPN-XX



Fiber Faceplate

VT-FTH-FP-XX



PTB2 Premise
Termination Box

VT-FTH-PTB2-XX



CDP Compact Fiber
Indoor Distribution Box

VT-CDP-XX



Fiber Pedestal

VT-FTH-PDT-103



Field Installable
Connector

VT-FIC3-SMSC-XX



OFC-FAC Optical
Dome Closure

VT-OFC-FAC-XX



OFC-IS Optical
Mini In-Line Closure

VT-OFC-IS-XX



Splitter Tray

VT-STRY-NGFM-32



FTTH Indoor Drop Cable

VT-CB-XX13-YY



FTTH Aerial Drop Cable

VT-CB-XX14-YY



PLC Splitter

VT-PLC-XXX-XXX-YY



Bend Insensitive
Patchcord G657A/B

VT-BIP-XXYY-ZZ

Fiber Optic Assemblies



PATCHCORDS

Our fiber optic assemblies are manufactured in state of the art facilities using the best components. All terminations pass 400x visual inspection, insertion and return loss test. We provide fully traceability and a test certification is supplied with each assembly.

Our patchcords are made for high degree of flexibility and customization. We support most connectors, fibre types, cable diameters and colours. We can provide custom packaging to your specification.

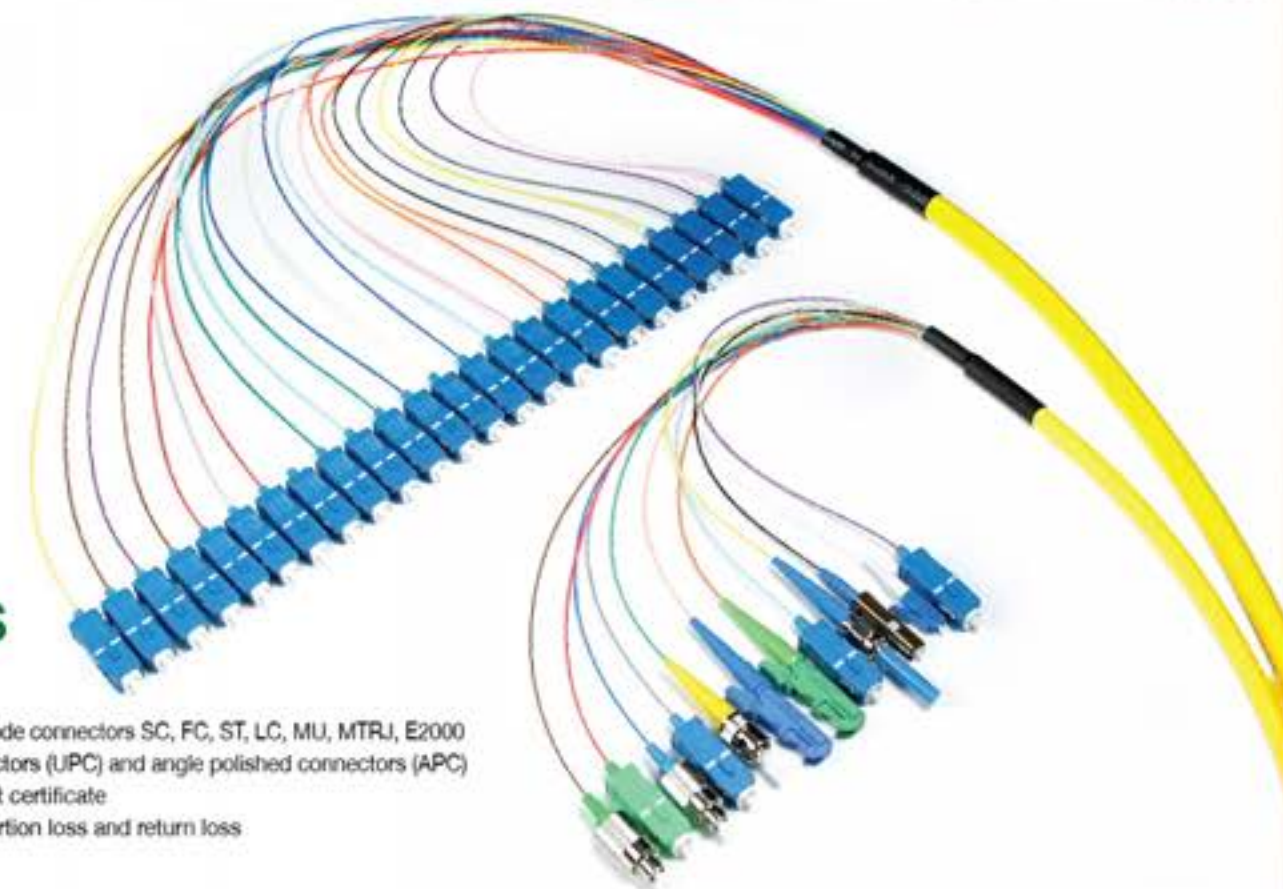
Our products are designed to offer high performance and exceed industry standards. In addition, we offers different levels of optical performances to meet customer requirements.

OPTIC PERFORMANCE (Multimode)		OPTIC PERFORMANCE (Singlemode)	
Insertion Loss	Max. 0.3dB	Insertion Loss	Return Loss
Typical 0.15dB		Max. 0.3dB	UPC Better than 50dB
		Typical 0.15dB	APC Better than 60dB

VT-PC	VT-PT	VT-PC	VT-PT	VT-PC	VT-PT
Connectors End 1 ¹	Connectors End 2 ¹	Fiber Type	Cable Configuration	Length ² (m)	Jacket Type
FC	FC	62 = 62.5/125	SI = Simplex	1m	LS = LSZH
FC/APC	FC/APC	50 = 50/125	DU = Duplex	2m	PV = PVC
SC	SC	09 = 9/125		3m	
SC/APC	SC/APC	OM3 = OM3		5m	
ST	ST	OM4 = OM4		10m	
LC	LC	7A = G657A		XXm	
LC/APC	LC/APC	7B = G657B			
MT-RJ	MT-RJ				
MU	MU				
	E2000				

¹ Other connectors are available on request
² Other lengths are available on request

Fiber Optic Assemblies



PIGTAILS

Features

- Multimode & singlemode connectors SC, FC, ST, LC, MU, MTRJ, E2000
- Ultra polished connectors (UPC) and angle polished connectors (APC)
- Full traceability & test certificate
- 100% tested for insertion loss and return loss

Options

- Bend insensitive fibers G657A/B
- OM4 fibers 10 Gigs at 550 meters
- Any color of cable jacket and connectors available
- Printing on cable
- Private labeling OEM packaging
- OFNP plenum jacket



OPTIC PERFORMANCE (Multimode)		OPTIC PERFORMANCE (Singlemode)	
Insertion Loss	Max. 0.3dB	Insertion Loss	Return Loss
Typical 0.15dB		Max. 0.3dB	UPC Better than 50dB
		Typical 0.15dB	APC Better than 60dB

VT-PT	VT-PC	VT-PC	VT-PT	VT-PC	VT-PT
Connectors	Fiber Type	Cable Type	Length (m)	Jacket Type	
FC	62 = 62.5/125	TB = Tight Buffered	1m	LS = LSZH	
FC/APC	50 = 50/125	LB = Loose Buffered	2m	PV = PVC	
SC	09 = 9/125	ES = Easy Strip	3m		
SC/APC	OM3 = OM3		5m		
ST	OM4 = OM4		10m		
LC	7A = G657A		XXm		
LC/APC	7B = G657B				
MT-RJ					
MU					
E2000					

Other pigtails are available on request.



MODE CONDITIONING PATCHCORDS

Mode conditioning patchcords are specifically designed for launching your gigabit signal into a conventional 62.5/125 or 50/125 fiber with very high bandwidth. It's can improve the transmission bandwidth by 3 to 4 times and greatly reduce mode noise.

DESCRIPTION	62.5/125	50/125
Operating wavelength	1310nm	
Maximum insertion loss	0.5dB	
Coupled power ratio (CPR)	28 to 40dB	12 to 20dB
Back reflection	S/M channel: 30dB M/M channel: 20dB	
Connector finish	PC or APC	
Sheath color	Orange (yellow for SM leg)	

CONNECTORS AVAILABLE

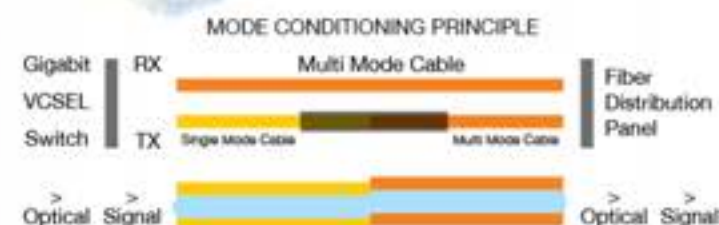
Types	FC, FC/APC, ST, SC, SC/APC, LC, MT-RJ, MU
Length	2m ± 10mm (other lengths available to order)

Product Packaging

Each MC path cord is packaged individually identified for traceability, a test certificate may supplied for each assembly when requested.

VT-MCD	Connectors End 1 ¹	Connectors End 2 ¹	Fiber Size	Length ² (m)	Jacket Type
	FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU	FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU	62 = 62.5/125 50 = 50/125 OM3 = OM3	1m 2m 3m 5m 10m XXm	LS = LSZH PV = PVC

¹ Other connectors are available on request
² Other lengths are available on request



ADAPTERS

An optical fiber adapter or uniter is used to mate two connectors together, usually mounted in a distribution panel or wall box.

Our optical fiber adapters are precision made to ensure the perfect alignment of connectors, reducing insertion loss. In most cases the sleeve is the critical part of the system that aligns the ferrule parts of the connectors, keeping the fibers in perfect alignment.

Generally there are 2 types of alignment sleeve within an adapter, phosphor bronze for multimode or zirconia (ceramic) for singlemode.



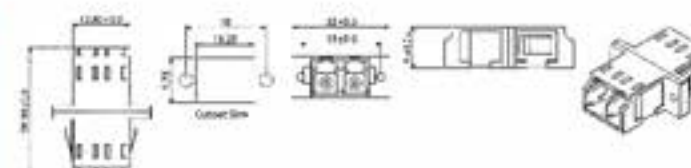
	CERAMIC	PHOSPHOR BRONZE	CONFORMANCE
Insertion Loss	0.1dB	0.15dB	IEC 61300-3-4
Maximum Mating Durability	500		IEC 61300-2-2
Receptacle Retention Force	1N-2.5N		IEC 61754-20
Operating Temperature	-25 to +70, 12 cycles		IEC 61300-2-22

Features

- Complies with IEC 61754-25
- Available as SC, FC, LC, ST, MT-RJ
- Available in simplex, duplex, quad (LC) and hybrid versions
- High precision zirconia or standard phosphor bronze sleeves
- High repeatability and stability
- RoHS compliant
- Low insertion loss

VT-AD	SC SC/APC FC FC/APC ST	LC MT-RJ E2000	SM = Singlemode MM = Multimode	SI = Simplex DU = Duplex
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Other adapters are available on request.



CONNECTORS



Our connectors are manufactured using the best quality ferrules & components.

OPTIC PERFORMANCE (MULTIMODE)		OPTIC PERFORMANCE (SINGLEMODE)		INTERMATEABILITY		MECHANICAL	
Insertion loss Max. 0.3dB Typical 0.15dB		Insertion loss Max. 0.3dB Typical 0.2dB		Return Loss UPC>50dB Typical 55dB APC>60dB Typical 65dB		Optically and mechanically compatible with all equivalent connectors. Compliant with IEC 61754-13	
						Capillary diameter tolerance: SM-126 ± 0.5µm MM-127 ± 0.5µm	
						Ferrule diameter: 2.5 ± 0.001mm Pre-radiused, PC-end finish for physical contact ferrule to ferrule. R10 to 25mm.	
						Tensile strength cable retention: >50N (283mm boot versions only)	

VT-C			
FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU	SM = Singlemode MM = Multimode	SI = Simplex DU = Duplex	3 = 3mm 2 = 2mm 9 = 900µm

Other connectors are available on request.

Product Packaging

Standard packaging: 100pcs bulk packed.

Options

Connector version available for: 3mm cable, 2mm cable and 900µm buffered fiber.

PRE-TERMINATED CABLES



Features

- Pre-terminated cables are supplied as standard with a protective sleeve, pulling eye and cable gland.
- Different cable constructions available (Tight Buffer, Breakout, Loose Tube)
- Multimode & singlemode connectors SC, FC, ST, LC, MU, MTRJ, E2000
- Ultra polished connectors (UPC) and angle polished connectors (APC)
- 100% tested for insertion loss and return loss

Options

- Bend insensitive fibers G657A/B.
- OM4 fibers 10 Gigs at 550 meters.
- Any colour of cable jackets and connectors available.
- Printing on cable.
- Private labeling OEM packaging.
- Armoured cable CST.

VT-PRE					
Cable Type ² TB = Tight Buffered BK = Breakout LT = Loose Tube	Number of fibers 4 8 12 16 24 36 48	Connectors ¹ FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU E2000	Fiber Type 62 = 62.5/125 50 = 50/125 09 = 9/125 OM3 = OM3 OM4 = OM4 7A = G657A 7B = G657B	Length ³ (m) 25m 50m 75m 100m 150m 200m	CAS = Cascade FAN = Fan-out

¹ Other connectors are available on request.

² Tight buffer LSOH internal/ external cable is used as standard.

³ Special lengths are available on request

ATTENUATED PATCHCORDS

High Performance attenuated patchcords are used to attenuate the optical signal in a link. These patchcords can be installed in place of conventional patchcords to provide a constant level of attenuation with a return loss of >50dB.

The attenuated patchcord is used to replace the conventional cable assembly and attenuator combination. It's a compact, multi-purpose passive device designed to operate at the 1310 and 1550nm wavelengths. Attenuated patchcords are available with a variety of connector styles including SC, LC, FC and ST to meet your requirements.

Features

- Provides the functions of attenuator and cable assembly simultaneously
- Low back reflection
- 100% insertion loss testing
- Many connector varieties available
- Conforms to the requirements of EIA/TIA standards.
- Inexpensive and compact

Applications

- Telecommunication networks
- CATV
- LAN and WAN
- Available attenuation (1.0 to 20dB with 1dB increments)



VT-ATP		Fiber Type	Cable Configuration	Length ² (m)	Attenuation
Connectors End 1 ¹	Connectors End 2 ¹	62 = 62.5/125MM 50 = 50/125MM 09 = 9/125SM	SI = Simplex DU = Duplex	1m 2m 3m 5m 10m XXm	01 = 1dB 02 = 2dB 15 = 15dB 20 = 20dB XX = XXdB
FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU	FC FC/APC SC SC/APC ST LC LC/APC MT-RJ MU				

¹ Other connectors are available on request.
² Other lengths are available on request.

PLUG-IN TYPE FIXED ATTENUATORS

Adopting advanced attenuation Fiber technology, our plug-in type fixed value attenuators feature high power endurance and low back reflection, suitable for high speed digital transmission and analog applications. Available in singlemode or multimode, SC, LC, FC, ST and MU type.

The optical attenuators are manufactured using the best quality components.



Dimensions	SC-35mm (L) x 12.7mm (W) x 9.5mm (D)	LC-33mm(L) x 6mm(W) x 10mm(D)	FC-10mm (OD) x 30mm (L)
Reflectance	UPC≥55dB		
Attenuation Tolerance	±0.5dB (Attenuations≤5dB)	10%	(6 dB≤Attenuations≤30dB)
International Standard	Telcordia GR-910-CORE SC/FC/LC/MU 1 to 30dB with 1dB increment (or custom attenuation within this range) 1310nm and 1550nm (or single wavelength) Digital band 1260-1360nm and 1430-1580nm (BellcoreSpec.) S+C+L band 1480-1610nm Special bandpass 1310±25nm and 1470-1610nm Single window 1280-1340nm or 1510-1590nm Dual window 1310 and 1550nm (±25nm)		



Product Packaging

Each attenuator is packaged individually

Features

- Plug-in type package
- Accurate attenuation
- Ultra low back reflection
- Broad wavelength band
- Flat response over all wavelengths
- Environmentally stable
- Quick Delivery

Applications

- Telecommunication networks
- Fiber optic sensors
- Test and measurement
- CATV
- LAN and WAN
- FTTx
- Attenuation values available

VT-AT	
SC SC/APC FC FC/APC LC MU	05 = 5dB 10 = 10dB 15 = 15dB 20 = 20dB 25 = 25dB XX = XXdB

Other versions are available on special order.

Fiber Management System



FTDS FIBER MANAGEMENT SYSTEM



FTDS FIBER CABINET



NGFM FIBER MANAGEMENT SYSTEM



FTDC FIBER MANAGEMENT SYSTEM



FTDM FIBER MANAGEMENT SYSTEM



MFM FIBER MANAGEMENT SYSTEM



FTDP FIBER MANAGEMENT SYSTEM



Floor Standing Rack



Cable Tray



Useful for cable management measuring 100 mm wide, and available in metre lengths.

19" Power Socket Outlet



A 13Amps power socket outlet allows to mount onto the 19" panel mounting.

Adjustable Feet / Castor Wheel



Adjustable feet is for levelling the rack after it has been placed in position. Castor Wheels available in set of 4.

Panel Mounting Member

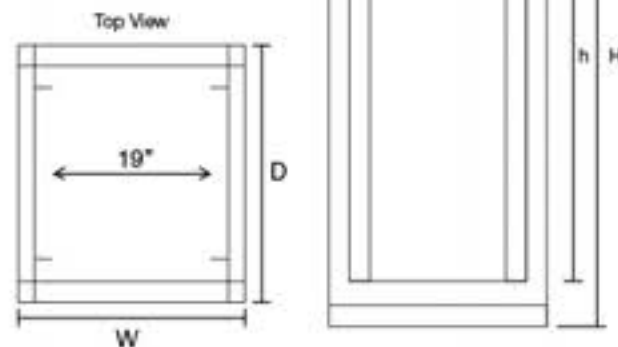


Allows all standard 19" equipment to be mounted on it.

Standard unit of 19" rack comprises of the following items:

- Rack framework.
- 1 vented top cover.
- 1 front glass door with lock.
- 1 vented rear door with lock.
- 2 detachable side panels with lock.
- 4 adjustable panel mounting members.
- 1 row power points.
- Cable with plug top.
- Castor wheel.
- 40 sets of M6 caged nuts.
- 1 set adjustable feet.
- Cable Tray.
- Epoxy high quality powder coated finishing. (Black Colour)

Dimensions for 19" Floor Standing



Size	MODEL					Overall Height (mm) "H"	Internal Height (mm) "h"	Power Outlet (13AMP)	Weight (kg) 800mm D
	600mm D	700mm D	800mm D	900mm D	1000mm D				
15U x 19"	VT1566	VT1567	VT1568	VT1569	VT15610	837	667	5 Socket	70
18U x 19"	VT1866	VT1867	VT1868	VT1869	VT18610	970	800	5 Socket	80
24U x 19"	VT2466	VT2467	VT2468	VT2469	VT24610	1237	1067	5 Socket	98
28U x 19"	VT2866	VT2867	VT2868	VT2869	VT28610	1415	1245	5 Socket	109
33U x 19"	VT3366	VT3367	VT3368	VT3369	VT33610	1637	1467	10 Socket	123
37U x 19"	VT3766	VT3767	VT3768	VT3769	VT37610	1815	1645	10 Socket	130
42U x 19"	VT4266	VT4267	VT4268	VT4269	VT42610	2037	1867	10 Socket	148

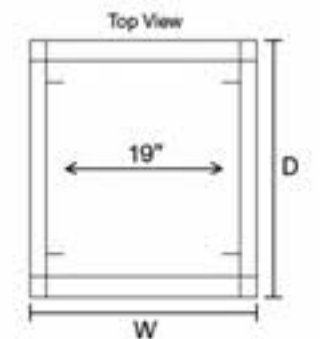
Wall Mount Rack



Standard unit of 19" rack comprises of the following items :

- Vented top & bottom cover.
- Rack framework.
- 1 front Perspex (Acrylic) door with lock (with frame).
- 2 detachable side panel with screw.
- 4 adjustable panel mounting members.
- 1 row power points.
- Cable with plug top.
- 20 sets of M6 caged nuts.
- Epoxy high quality powder coated finishing (Black Colour).

Dimensions for 19" Wall Mount



Size	MODEL			Overall Height (mm) "H"	Internal Height (mm) "h"	Power Outlet (13AMP)	Weight (kg) 500mm D
	400mm D	500mm D	600mm D				
6U x 19"	VT0664	VT0665	VT0666	337	267	3 Socket	17
9U x 19"	VT0964	VT0965	VT0966	470	400	3 Socket	20
12U x 19"	VT1264	VT1265	VT1266	603	533	3 Socket	23
15U x 19"	VT1564	VT1565	VT1566	737	667	3 Socket	26
18U x 19"	VT1864	VT1865	VT1866	870	800	3 Socket	29

2-Post Open Frame Rack

The 2 post Open Rack offer a quality solution for the economical installation of rack-mountable networking equipment. The 2-Post Rack offers cost conscious customers a simple solution for rack mounting network equipment in a secure managed environment including data centers, wiring closets and co-location facilities.

MODEL	Product Code	Overall Height (mm)
42U	VT2OR4200	2037
46U	VT2OR4600	2215

2-Post with Trunking for Cable Management

The 2 post Open Rack with Trunking offers a quality cable management solution for the installation of networking installation

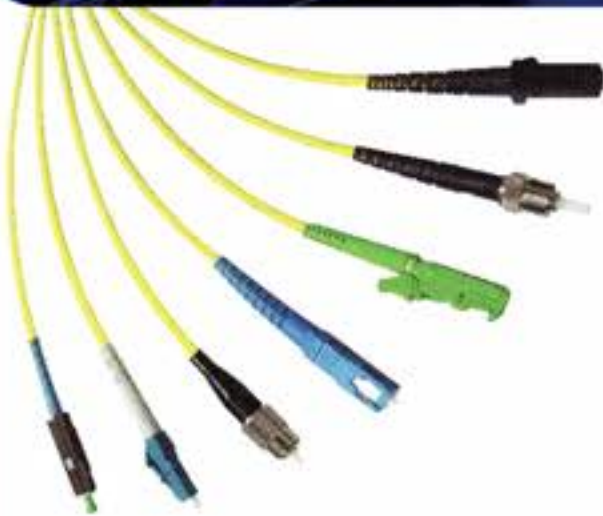
MODEL	Product Code	Overall Height (mm)
42U	VT2TOR4200	2037
46U	VT2TOR4600	2215



2-Post Open Frame Rack

2-Post with Trunking for Cable Management

19" Rack with Cable Management System



Trunking for Cable Management



Wire duct to facilitate a better cable Management

Adjustable Feet / Castor Wheel



Adjustable feet is for levelling the rack after it has been placed in position. Castor Wheels available in set of 4.

19" Power Socket Outlet



A 13Amps power socket outlet allows to mount onto the 19" panel mounting.

Panel Mounting Member

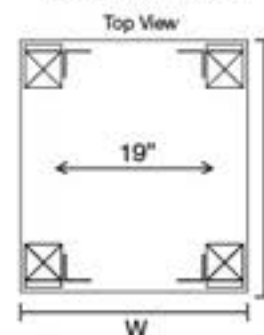


Allows all standard 19" equipment to be mounted on it.

Standard unit of 19" Trunking rack comprises of the following items:

- Rack framework.
- 1 vented top cover.
- 2 front glass door with lock.
- 2 vented rear door with lock.
- 2 detachable side panels with lock.
- 4 adjustable panel mounting members.
- 1 row power points.
- Cable with plug top.
- Castor wheel.
- 40 sets of M6 caged nuts.
- 1 set adjustable feet.
- 4X Metal trunking for Cable Management. (Vertical)
- Epoxy high quality powder coated finishing. (Black Colour)

Dimensions for 19" Floor Standing



Size	MODEL			Overall Height (mm) "H"	Internal Height (mm) "h"	Power Outlet (13AMP)
	800mm D	900mm D	1000mm D			
15U x 800mm (19")	VT1588	VT1589	VT15810	837	667	5 Socket
18U x 800mm (19")	VT1888	VT1889	VT18810	970	800	5 Socket
24U x 800mm (19")	VT2488	VT2489	VT24810	1237	1067	5 Socket
28U x 800mm (19")	VT2888	VT2889	VT28810	1415	1245	5 Socket
33U x 800mm (19")	VT3388	VT3389	VT33810	1637	1467	10 Socket
37U x 800mm (19")	VT3788	VT3789	VT37810	1815	1645	10 Socket
42U x 800mm (19")	VT4288	VT4289	VT42810	2037	1867	10 Socket

Rack Accessories



Ventilation Fan

Robust Exhaust Fan for maintaining an even temperature in rack.
code: VT-VF1



Vented Panel

Cover open rack space to enhance airflow, includes mounting hardware.
1U code: VT-VP1
2U code: VT-VP2
3U code: VT-VP3
4U code: VT-VP4



1U Ring Panel

12-ports cable management
code: VT-RP12



Cable Tray

Usable for cable management, measuring 100mm wide, and available in metre lengths.
code: VT-CT1



Equipment Tray

Known as fixed tray or adjustable tray. Available in 430mm, 630mm & 730mm (Not exceeding 30 kg)
430mm code: VT-EQT 430mm
630mm code: VT-EQT 630mm
730mm code: VT-EQT 730mm



Vented Reinforced Fixed Tray

Available in 430mm 630mm & 730mm depth (Not exceeding 30 kg)
430mm code: VT-VRFT 430mm
630mm code: VT-VRFT 630mm
730mm code: VT-VRFT 730mm



19" Rotating Keyboard Sliding Tray

19" Rotatable Keyboard Sliding tray which allows a better solution for keyboard and mouse.
code: VT-SLT-RO



Fan Netting

As a protection for Ventilation fan.
Code: VT-FN1



Blank Panel

Cover open rack space to occupy extra rack space.
1U code: VT-BP1
2U code: VT-BP2
3U code: VT-BP3
4U code: VT-BP4



1U Cable Management Panel

For cable management usage, complete with cover.
code: VT-CMP1



4U Multifunction Drawer

Usable for storage
code: VT-DRW4U



1U Rack Mountable Ventilation Fan Tray

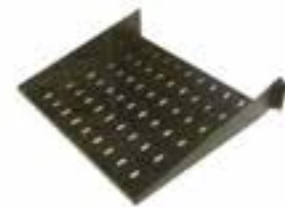
Robust Exhaust Fan for maintaining an even temperature in the rack.
2 fan tray code: VT-FT2
4 fan tray code: VT-FT4



Vented Reinforced Fixed Tray

Usable for easy access to equipment.
430mm code: VT-SLT 430mm
630mm code: VT-SLT 630mm
730mm code: VT-SLT 730mm

Rack Accessories



2U Cantilever Tray

Can be used upturn or reverse, depending on choice.
code: VT-CNT



Chassis Runner (CR430,630,730)

Commonly used for supporting equipment, Available in 430mm, 630mm, 730mm.
430mm code: VT-SLT 430mm
630mm code: VT-SLT 630mm
730mm code: VT-SLT 730mm



Adjustable Feet

For levelling the rack after it has been placed in position.
code: VT-AJ



Castor Wheels

Available in set of 4pcs.
code: VT-CWOS



1U Fiber Panel (Optional)

code: VT-ST/ VT-SC



Outdoor Lock (Optional)

Stainless Steel lock for outdoor cabinet.



Lock (Optional)

Fig A - Quick Release latch for side panel.

Fig B - PVC lock for all types of panel cover.



Stabilizer Kit

Front mounting capabilities. Stabilizer enclosure.
code: VT-SK1



Patch Panel

Patch panel with 24 ports for connecting RJ45 connectors.
code: VT-PP24



Cable Ladder

For external cable management and available in metre lengths.
code: VT-CL1



Castor Wheels with stopper

Available in set of 4pcs.
code: VT-CWS



Outdoor Hanger (Optional)

Door Hanger for Outdoor Cabinet.



Lock with Handle (Optional)

Advanced security lock with handle.



Joining Kit (Optional)

Allows 2 racks or more join together.

Custom-Made Metal Fabrication



Stainless Steel Enclosures



Mild Steel Custom-made Enclosures



Control Panel



Distribution Boards

Custom-made Parts



Vitawatermin Sdn. Bhd. specializes in providing high quality custom-made metal fabrication. We have the ability to handle a wide range of fabrication requests for prototype, short run, or long run production. Vitawatermin Sdn. Bhd. will work closely with you to understand and meet your specific fabrication needs. Our technicians focus on innovative ways to setup and process materials that reduce time and waste which results in lower cost per part.

We are known for our quick turnaround times and quality customer service. Vitawatermin Sdn. Bhd. utilizes our metal fabrication capabilities in manufacturing our own products with stringent quality control and cost effectiveness. Our customers will benefit from the increased productivity and quality inherent in the production of our own parts.