"Results You Can Count On"

Model CFA-24A
Transparent Cable Farm Automation Switch

- **Ideal for Broadband Forum's IR-337 Gfast Certification and TR-249 VDSL2 Vectoring Testing**
- **High performance transparent solution designed to automate testing of cable farms**
- **Use additional units to expand the number of segments and channels**
- **Multiple Vectoring groups per unit or across multiple units**
- **Co-located and non-co-located test configurations**
- **Connect cables once then switch programmatically**
- **Automatically terminates unused channels and/or segments**
- **Micro-Interruptions**
- **Supports Reverse Powering for Gfast**
- **Low crosstalk/low insertion Loss**
- **Embed remote commands in scripts (e.g., TCL, Python)**

Switching for up to five segments.

Control with User-Friendly Software or Remote Commands

Each high-frequency punch down connector accepts four twisted pairs (eight wires). For each set of four pairs, there are two connectors for CO or CPE and ten for connecting both ends of five loop segments. This provides connections for five segments of 24 pairs.

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The Model CFA-24A Transparent Cable Farm Automation Switch is a transparent, electrically neutral, switching device that allows up to twenty-four incoming cable farm lines to be switched to five different loop segments. Use your own cable or purchase cable from Telebyte (see *Ordering Information*).

Operating in a frequency band up to 212 MHz, the CFA-24A is highly suited to lab-grade testing of next-gen devices where live crosstalk is required (e.g., VDSL2 Vectoring or Gfast performance testing). Telebyte's superior transparency delivers excellent crosstalk accuracy. Ideal for IR-337 Gfast Certification and TR-249 VDSL2 Vectoring testing.

Now you can have a flexible cable farm with micro-interruptions that is easy to automate and configure. Also supports Reverse Powering for Gfast.

Configurations may be expanded by adding channel expander units, allowing users to scale the number of pairs that can be switched from 24 to as many as needed, in groups of 24. In addition, segment extender units can be jumpered together to add more line segments. Flexibility is further enhanced by allowing each unit to be configured for multiple vectoring groups as well as co-located and non-co-located configurations. This scalability optimizes your CAPEX budget.

The above shows an example of a dense VDSL2 Vectoring set up - 18 units used for 144 channels with 15 loop segments on all channels. To allow for dense installations, each unit may be installed in the front and/or back of a standard 19" rack.

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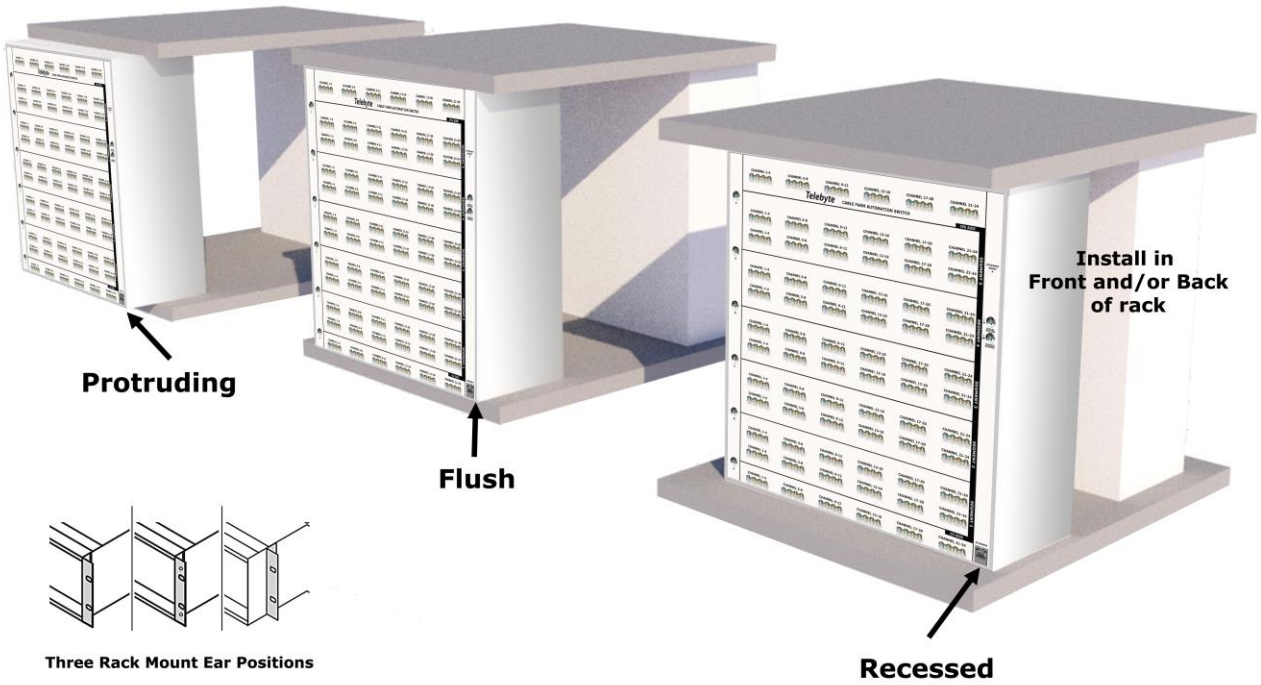
Three rack mounting options make installation customizable to your needs.

CFA-24 Mounting Options
(Front and/or Back of 19" Rack)



Three Rack Mount Ear Positions

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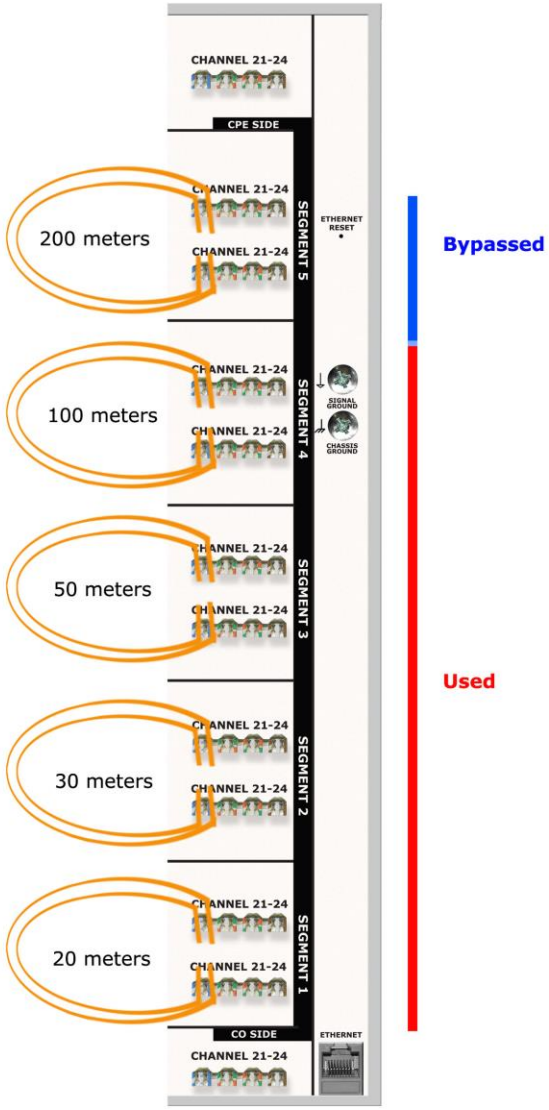
Example ID-337 Test Setup

(Selection of 200 meters)

- Five loop segments of different lengths of CW1420 are each attached to one of five segments.
- The allowable loop lengths of this non-colocated setup are 20, 50, 100, 200 and 400 meters.
- Segments 1, 2, 3, and 4 are used to form the 200 meters. Segment 5 is bypassed.



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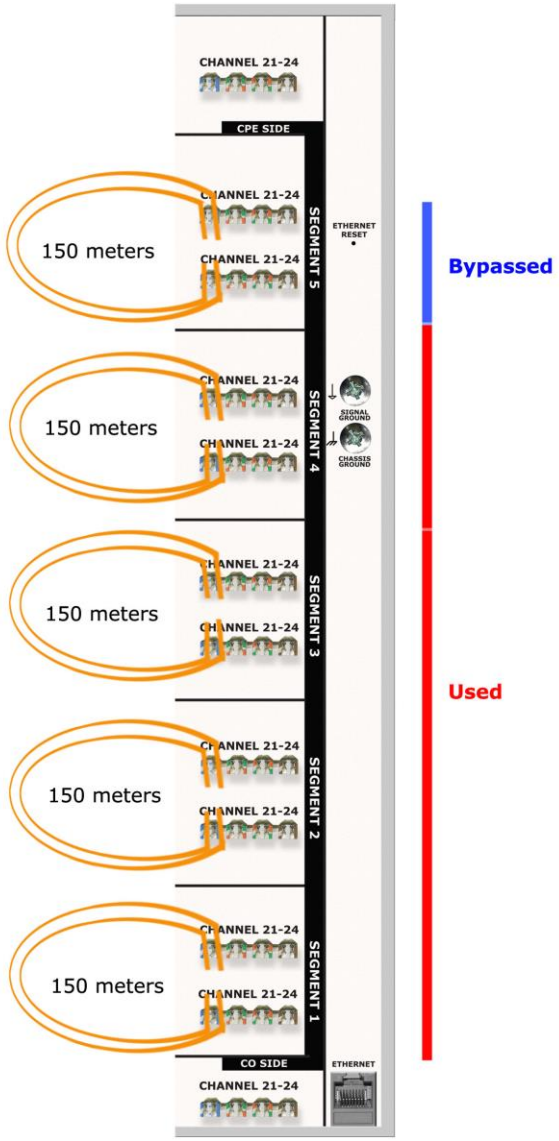
Example TR-249 Issue 1 Test Setup

(Selections of 150, 300, 450, 600 and 750 meters)

- Five 150-meter, 0.4mm loop segments are each attached to one of five segments.
- The allowable loop lengths of this setup are 150, 300, 450, 600 and 750 meters.
- Segments 1, 2, 3 and 4 are used to form the 600 meters. Segment 5 is bypassed. This configuration represents the Medium Loop (17 MHz profile) per TR-249 Issue 1.



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Specifications

Specifications	
Switching Capability	Switching of up to 5 loop segments for 24 local loops (expandable by adding channel expanders and/or segment extenders)
Insertion Loss across all 5 Segments in Bypass (from CO side to CPE side)	• DC to 17 MHz: less than 0.3 dB • 17 MHz to 30 MHz: less than 0.46 dB • 30 MHz to 106 MHz: less than 0.57 dB • 106 MHz to 212 MHz: less than 0.83 dB
Channel-to-Channel Isolation	• DC to 17 MHz: minimum 87 dB • 17 MHz to 30 MHz: minimum 80 dB • 30 MHz to 106 MHz: minimum 68 dB • 106 MHz to 212 MHz: minimum 62 dB
Impedance	100 ohms
Temperature	• Operating: 0°C to 50°C (32°F to 122°F) • Storage: -20°C to 70 °C (-18°F to 158°F)
Operating Relative Humidity	0% to 95% relative humidity (non-condensing)
Connectors	• CO Input/Output: 6 x 8 Way Punch Down Blocks • CPE Input/Output: 6 x 8 Way Punch Down Blocks • Line Segments: 60 x 8 Way Punch Down Blocks • Ethernet Control: RJ45 • Power: DC Power Jack
Conductors Accepted	• Diameters from 0.6 mm to 0.4 mm • Solid conductors • Shielded or unshielded
Dimensions	Overall: 577.05mm H x 486.60mm W x 145.25 mm D (13-U High) 22.72"H x 19.16"W x 5.72"D (13-U High) Rack mountable (front and/or back) in 19" rack
Micro-Interruptions	Location: CO or CPE side - on any one channel Interrupt Time: 5ms to 100ms in 1-ms increments
External Power Supply	88 to 264 VAC, 50 or 60 Hz; 6.0 VDC Output
Cycles of Operation	1,000,000 Minimum
DC Rating Maximum Tip - Ring	• Max Voltage: 60VDC • Max Interrupt Power: 62.5VA • Max Carry Current: 2A

Specifications are subject to change without notice. Made in USA.

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Ordering Information

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CFA-24A	24-Channel Transparent Cable Farm Automation Switch (Controller, Channel or Segment Extender)
CFA-KIT-PPKJ	Kit to connect to CO and/or CPE side of test. Customer provides cable. Consists of one 24-Port CAT6A Shielded Patch Panel - Krone Type 1U. (CFA-24 facing side is punched down, opposite side has 24 CAT6A female connectors).
CFA-KIT-PPKJ-CW1420	Kit to connect to CO and/or CPE side of test. Customer provides cable. Consists of one 24-Port CAT6A Shielded Patch Panel - Krone Type 1U. (CFA-24 facing side is punched down, opposite side has 24 CAT6A female connectors) and 24 meters of CW1420 cable.
CFA-CA-MGT	Cable Management Kit. Includes 6 rack-mountable cable-tie bars with cable ties.
CFA-PDTOOL-KIT	Punch down tool kit
CW1420-400	Spool of CW1420 400 m cable (4 pairs) for ID-337 testing