# Modular 1 RU Multifunction System
## Copper :: T1/E1 DSX, T3/E3 DSX, Ethernet RJ, Optical Patch and Splice

## Overview

As customer demand continues to push advanced capabilities to the edge of wireless and wireline networks, service providers face the challenge of deploying efficient connectivity outward from the central office. Telect's 1 RU multifunction panel addresses this through a modular design that enables flexible, dynamic connectivity, building efficiency into network applications.

Designed to function in edge locations such as cell towers and remote sites, this modular provides a flexible platform for T1, T3, Ethernet and fiber optic circuit management, all in just 1.75" of vertical rack space.

Because these environments typically offer limited space for hardware, effective circuit access and monitoring can be a challenge. With the 1 RU panel, you gain high density, with circuit counts up to:

- 24 DSX-1
- Six DSX-3
- 48 RJ45 Ethernet
- 72 Fiber optic (LC only)

Combination connectivity is also possible, as are T1 interconnect and analog capabilities. Choose from a comprehensive line of modules to build the ideal space-saving connectivity platform for your application.
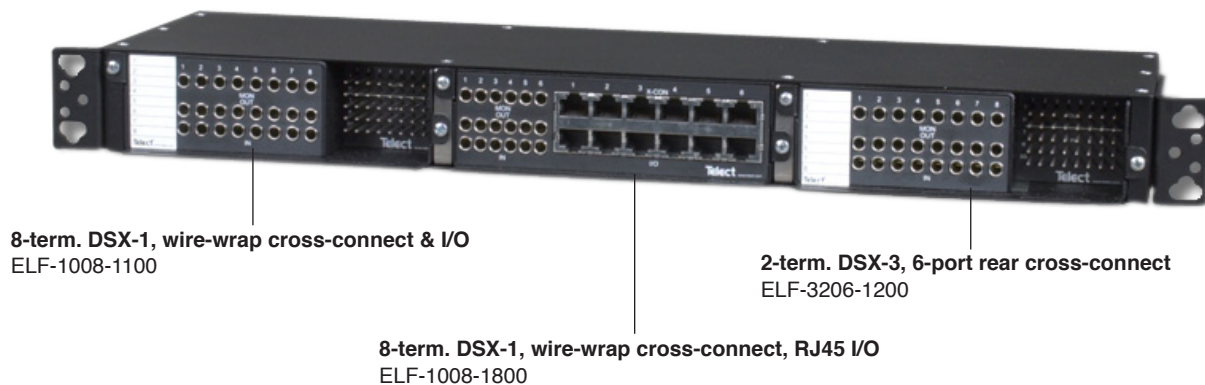
## Primary Benefits

- Modular design helps you manage overall costs
- Total front access configurations enable simple circuit access
- Designed to ITU G.703 standards
- Chassis and modules include built-in wire management
- Module options include front cross-connect or total front access DSX-1, DSX-3, T1 interconnect, Ethernet RJ45, optical patch, splice or splitter
- Chassis options include high-density 3-module rack-mount or 1-module wall-mount

## Applications

- Wireless base stations
- Demarcation points
- Remote huts
- Ethernet

**3 Module 1RU Chassis**
ELF-0000-2400



**8-term. DSX-1, wire-wrap cross-connect & I/O**
ELF-1008-1100

**2-term. DSX-3, 6-port rear cross-connect**
ELF-3206-1200

**8-term. DSX-1, wire-wrap cross-connect, RJ45 I/O**
ELF-1008-1800

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## Build a Panel

Step one: Start with a chassis or bracket – choose rack-mount or wall-mount based on capacity requirements and application considerations.

Step two: Choose modules – select based on signals being managed, connector types preferred, capacity requirements, and chassis type (standard or total front access).

Step three: Finish with accessories – choose Telect for patch cords and cabling as needed for your panel solution.

## Chassis and Brackets
**Choose the ideal high-density housing for traditional rack-mount or limited-space wall-mount applications.**

**Standard 1 RU/3-Module Rack-Mount Chassis**

| |
|---|
| 1 RU footprint, three module capacity |
| Reversible brackets for 19" or 23" mounting |
| Termination capacities: Up to 24 DSX-1, 6 DSX-3, 48 optical patch |
| Fully enclosed for robust RF protection at cell tower bases and other environments |
| Blank faceplate also available (ELF-0000-0001) |

ELF-0000-2400

**Total Front Access Wall-Mount Chassis**

| |
|---|
| One module capacity |
| Designed for use with total front access DSX-1 and DSX-3 modules |

ELF-0000-0600

**Optical Wall-Mount Enclosure**

| |
|---|
| One module capacity |
| Optimized for use with optical modules |
| Includes lockable access door |
| Ideal for co-locations |

ELF-0000-0800

**1 RU Wall-Mount Bracket**

| |
|---|
| Holds 1 RU chassis against a wall or cabinet |
| Enables chassis to extend with minimum profile |
| Provides additional mounting versatility for 1 RU chassis |

ELF-0000-0900

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## T1/E1 Modules

Choose from a broad range of options and gain basic T1 connectivity optimized to your specifications. All T1/E1 modules feature Telect's Dedicated Digital Jacks for industry-standard Bantam monitoring and a lifetime of reliable connections.

**ELF-1008-1200**

8-Termination Wire-Wrap/BNC Module

Wire-wrap cross-connect and BNC I/O fields

Front cross-connect design with BNC connectors on rear



**ELF-1008-1800**

8-Termination Wire-Wrap/RJ45 Module

Wire-wrap cross-connect and RJ45 I/O fields

Front cross-connect design with PCB-mounted RJ45 connectors on rear



**ELF-1008-1100**

8-Termination Wire-Wrap Module

Wire-wrap cross-connect and I/O fields

Traditional connectivity in a front-cross-connect design



**ELF-3006-1100**

6-Termination Total Front Access Wire-Wrap Module

All connections on the front of the module for simple access
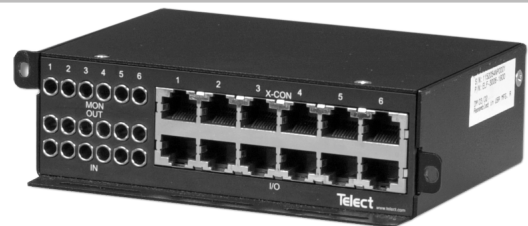
Wire-wrap cross-connect and I/O fields



**ELF-3006-1800**

6-Termination Total Front Access RJ48 Module

All connections on the front of the module for simple access

RJ48 cross-connect and I/O fields provide simple, versatile connectivity



**ELF-0005-0001**

48-Pin VF Alarm Block Module

Designed for voice frequency termination or alarm use

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# Modular 1 RU Multifunction System
## Copper :: T1/E1 DSX, T3/E3 DSX, Ethernet RJ, Optical Patch and Splice

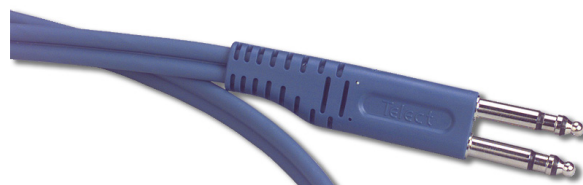## Recommended Accessories for T1/E1 Modules

### Single Bantam Patch Cords

| | |
|---|---|
| 3 ft. | 040-1000-003 |
| 5 ft. | 040-1000-005 |
| 10 ft. | 040-1000-010 |

### Dual Bantam Patch Cords

| | |
|---|---|
| 3 ft. | 040-2000-003 |
| 5 ft. | 040-2000-005 |
| 10 ft. | 040-2000-010 |

### Single 735A BNC Cables

| | |
|---|---|
| 3 ft. | 043-0911-003 |
| 6 ft. | 043-0911-006 |
| 10 ft. | 043-0911-010 |

### Dual 735A BNC Cables

| | |
|---|---|
| 3 ft. | 043-0911-003 |
| 6 ft. | 043-1911-006 |
| 10 ft. | 043-1911-010 |

### Cat 5e Ethernet (RJ) Patch Cords

| | |
|---|---|
| 3 ft. | EPCE-CT5E-BL03 |
| 5 ft. | EPCE-CT5E-BLO5 |
| 7 ft. | EPCE-CT5E-BL07 |

**T1 Cross-Connect Wire**     06115RC

### DS1 Jack Specifications

| | |
|---|---|
| Return loss | ≤26dB at 722 kHz |
| Insertion loss | <-0.5dB at 1.544 Mbps |
| Monitor level | -20dB +/- -1.5dB at 1.544 Mbps |
| Contact resistance | <0.01 Ohms |
| Characteristic impedance | 100/120 Ohms |
| Adjacent channel crosstalk | ≤-60dB at 1.544 Mbps |
| Interchannel crosstalk | ≤-60dB at 1.544 Mbps |

# Modular 1 RU Multifunction System
## Copper :: T1/E1 DSX, T3/E3 DSX, Ethernet RJ, Optical Patch and Splice

## T3/E3 Modules

Telect's patented 6-port DSX-3 design provides access to both sides of the T3 signal to greatly simplify maintenance. Rear cross-connect and total front access options are available.

### ELF-3206-1200

2-Termination Rear
Cross-Connect DSX-3
Module

BNC I/O field

Mini-WECO module jacks



### ELF-3206-1900

1-Termination Total Front
Access DSX-3 Module

All connections on the front of
the module for simple access

BNC I/O field and
mini-WECO T3 jacks



## Recommended Accessories for T3/E3 Modules

### Single 735A BNC Cables

| | |
|---|---|
| 3 ft. | 043-0911-003 |
| 6 ft. | 043-0911-006 |
| 10 ft. | 043-0911-010 |

### Dual 735A BNC Cables

| | |
|---|---|
| 3 ft. | 043-0911-003 |
| 6 ft. | 043-1911-006 |
| 10 ft. | 043-1911-010 |

### Mini-WECO 735A Patch Cords

| | |
|---|---|
| 3 ft. | 043-0922-003 |
| 6 ft. | 043-0922-006 |
| 10 ft. | 043-0922-010 |



### DS3 Jack Specifications

| | |
|---|---|
| Return loss | <-26dB at DS3, STS-1 and E3 signal rates |
| Insertion loss | <1.00dB at DS3 signal rates for modules with one monitor network |
| Monitor level | 21dB +/- 1.5dB signal level |
| Contact resistance | <0.01 Ohms |
| Characteristic impedance | 75 Ohms |

## Ethernet Modules

Cat 5e and Cat 6 compatible, these high-density modules feature RJ45 connectors and IDC fields for simple carrier-class connectivity.
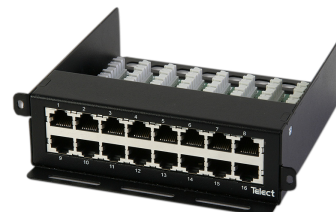
### ELF-9716-1700

16-Termination Cat 5e Patch
Module, RJ45-IDC

RJ45 connectors on the front

IDC field on the rear

Anchor points provide ample
cable management



### ELF-9716-1900

16-Termination RJ-RJ
T1/Ethernet Patch Module

Up to 48 terminations in a
3-module/1 RU panel

Jack contacts wired straight
through, enabling a wide range
of applications

T1, DDS, Ethernet 10/100 circuit
access and re-arrangement



### ELF-9716-2300

8-Termination Cat 6 Patch Module, RJ45-IDC

RJ45 connectors on the front

IDC field on the rear

Anchor points provide ample
cable management

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# Modular 1 RU Multifunction System
## Copper  ::  T1/E1 DSX, T3/E3 DSX, Ethernet RJ, Optical Patch and Splice

## Recommended Accessories for Ethernet Modules

### Cat 5e Ethernet Patch Cords

| | |
|---|---|
| 3 ft. | EPCE-CT5E-BL03 |
| 5 ft. | EPCE-CT5E-BLO5 |
| 7 ft. | EPCE-CT5E-BL07 |

### Cat 6 Ethernet Patch Cords

| | |
|---|---|
| 3 ft. | EPCE-CAT6-BL03 |
| 5 ft. | EPCE-CAT6-BLO5 |
| 7 ft. | EPCE-CAT6-BL07 |

## Interconnect Modules

Engineered for applications with limited potential for change, customer premise and demarcation environments, interconnect modules feature hard-wired internal cross-connects to provide long-lasting quality connections between network elements.

### ELF-9704-1119

| |
|---|
| 4-Termination RJ48C/Wire-Wrap Module |
| Wire-wrap NE-1 (rear) and RJ48C NE-2 (front) jacks |
| Standard Bantam patch and monitor jacks |



### ELF-3004-1800

| |
|---|
| 4-Termination RJ45 Total Front Access Module |
| All connections on the front of the module for simple access |
| RJ45 ports and Bantam jacks for monitoring |



## Recommended Accessories for Interconnect Modules

### Single Bantam Patch Cords

| | |
|---|---|
| 3 ft. | 040-1000-003 |
| 5 ft. | 040-1000-005 |
| 10 ft. | 040-1000-010 |

### Dual Bantam Patch Cords

| | |
|---|---|
| 3 ft. | 040-2000-003 |
| 5 ft. | 040-2000-005 |
| 10 ft. | 040-2000-010 |

| | |
|---|---|
| **T1 Cross-Connect Wire** | 06115RC |

## Optical Modules

Gain basic optical connectivity in the smallest footprint available today. Optical modules are engineered for low circuit count applications where space is a premium, with front access to enable simple maintenance. Fit in standard rack-mount chassis or one-module optical enclosure

### Fiber Patch Modules
High-density patch capabilities in minimal space

| |
|---|
| ELF-PC12-SC00 (SC/UPC) |
| ELF-PC12-SA00 (SC/APC) |
| ELF-PC12-FC00 (FC/UPC) |
| ELF-PC24-LC00 (LC/UPC) |



### Fiber Patch and Splice Modules
Combination capabilities in a single module

| |
|---|
| ELF-SP12-SCPT (SC/UPC) |
| ELF-SP12-SAPT (SC/APC) |
| ELF-SP12-FCPT (FC/UPC)) |
| ELF-SP12-LCPT (LC/UPC) |



### Loaded Fiber Patch Modules
High-density patch capabilities in minimal space

| |
|---|
| ELF-PC12-SCDF100 (SC/UPC, 100 ft pigtail) |
| ELF-PC12-SCDF300 (SC/UPC, 300 ft pigtail) |

Custom configurations available, contact Telect for details



### Optical Module Specifications

| | |
|---|---|
| Return loss | <55dB |
| Insertion loss | <0.5dB |
| Mode | Single |
| Bypass | 1310/1550 +/-20 nm |

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## Recommended Accessories for Optical Modules

**SC/UPC Patch Cords**

| | |
|---|---|
| 3.6 m | F12-SSG-M003-6 |
| 5 m | F12-SSG-M005-0 |
| 7 m | F12-SSG-M007-0 |

**FC/UPC Patch Cords**

| | |
|---|---|
| 3.6 m | F12-FFG-M003-6 |
| 5 m | F12-FFG-M005-0 |
| 7 m | F12-FFG-M007-0 |

**LC/UPC Patch Cords**

| | |
|---|---|
| 3.6 m | F12-LLG-M003-6 |
| 5 m | F12-LLG-M005-0 |
| 7 m | F12-LLG-M007-0 |

## Physical Specifications

| Description | Width | Height | Depth | Weight | Capacity | Circuit Access & I/O | Agency Compliance |
|---|---|---|---|---|---|---|---|
| Chassis | | | | | | | |
| Standard 1 RU/3-Module Rack-Mount Chassis ELF-0000-2400 | 19" (483 mm) | 1.75" (45 mm) | 5" (127 mm) | 5 lbs. (2.3 kg) | 3 modules | | NEBS, ITU-T |
| Total Front Access Wall-Mount Chassis ELF-0000-0600 | 6" (152 mm) | 1.75" (45 mm) | 4" (102 mm) | 2 lbs. (.9 kg) | 1 module | | |
| Optical Wall-Mount Enclosure ELF-0000-0800 | 9.3" (236 mm) | 2.3" (58 mm) | 6.1" (155 mm) | 2 lbs. (.9 kg) | 1 module | | |
| 1 RU Chassis Wall-Mount Bracket 400641 | 19" (483 mm) | 2" (51 mm) | 8" (203 mm) | 4 lbs. (1.8 kg) | 1 chassis (3 modules) | | |
| Blank Faceplate | 19" (483 mm) | 1.75" (45 mm) | | 2 lbs. (.9 kg) | | | |
| T1/E1 Modules | | | | | | | |
| 8-Termination Wire-Wrap/BNC Module ELF-1008-1200 ELF-1008-1200 | 6" (152 mm) | 1.64" (42 mm) | 5.5" (140 mm) | 2.5 lbs. (1.1 kg) | 8 terminations | BNC I/O Wire-wrap XC Front XC | NEBS, ITU-T |
| 8-Termination Wire-Wrap/RJ45 Module ELF-1008-1800 | 6" (152 mm) | 1.64" (42 mm) | 5.5" (140 mm) | 2 lbs. (.9 kg) | 8 terminations | RJ45 I/O Wire-wrap XC Front XC | NEBS, ITU-T |
| 8-Termination Wire-Wrap Module ELF-1008-1100 | 6" (152 mm) | 1.64" (42 mm) | 5.5" (140 mm) | 2 lbs. (.9 kg) | 8 terminations | Wire-wrap I/O Wire-wrap XC Front XC | NEBS, ITU-T |
| 6-Termination Total Front Access Wire-Wrap Module ELF-3006-1100 | 6" (152 mm) | 1.62" (41 mm) | 4.25 " (108 mm) | 2 lbs. (.9 kg) | 6 terminations | Wire-wrap I/O Wire-wrap XC TFA | NEBS, ITU-T |

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| | Width | Height | Depth | Weight | Capacity | Circuit Access & I/O | Agency Compliance |
|---|---|---|---|---|---|---|---|
| **T1/E1 Modules continued** | | | | | | | |
| 6-Termination Total Front Access RJ48 Module ELF-3006-1800 | 6" (152 mm) | 1.63" (41 mm) | 3.75" (95 mm) | 2 lbs. (.9 kg) | 6 terminations | RJ48 I/O RJ48 XC TFA | NEBS, ITU-T |
| 48-Pin VF Alarm Block Module ELF-0005-0001 | 6" (152 mm) | 1.63" (41 mm) | 3.75" (95 mm) | 2 lbs. (.9 kg) | 48 terminations | Wire-wrap Front XC | NEBS, ITU-T |
| **T3/E3 Modules** | | | | | | | |
| 2-Termination Rear Cross-Connect DSX-3 Module ELF-3206-1200 | 6" (152 mm) | 1.63" (41 mm) | 5" (127 mm) | 2 lbs. (.9 kg) | 2 terminations | BNC I/O BNC XC Rear XC | NEBS, ITU-T |
| 1-Termination Total Front Access DSX-3 Module ELF-3206-1900 | 6" (152 mm) | 1.63" (41 mm) | 5" (127 mm) | 2 lbs. (.9 kg) | 1 termination | BNC I/O BNC XC TFA | NEBS, ITU-T |
| **Ethernet Modules** | | | | | | | |
| 16-Termination Cat 5e Patch Module, RJ45-IDC ELF-9716-1700 | 5.86" (149 mm) | 1.63" (41 mm) | 7.13" (181 mm) | 1.5 lbs. (.7 kg) | 16 terminations | IDC NE-1 RJ45 NE-2 | |
| 16-Termination RJ-RJ T1/Ethernet Patch Module ELF-9716-1900 | 5.86" (149 mm) | 1.63" (41 mm) | 5" (127 mm) | 2 lbs. (.9 kg) | 16 terminations | RJ NE-1 RJ NE-2 | |
| 8-Termination Cat 6 Patch Module, RJ45-IDC ELF-9716-2300 | 5.88" (149 mm) | 1.63" (41 mm) | 3.56" (90 mm) | 1.5 lbs. (.7 kg) | 8 terminations | IDC NE-1 RJ45 NE-2 | |
| **Interconnect Modules** | | | | | | | |
| 4-Termination RJ48C/Wire-Wrap Module ELF-9704-1119 | 5.25" (133 mm) | 1.65" (42 mm) | 5.25" (133 mm) | 2 lbs. (.9 kg) | 4 terminations | Wire-wrap NE-1 RJ48C NE-2 Front XC | |
| 4-Termination RJ45 Total Front Access Module ELF-3004-1800 | 6" (152 mm) | 1.63" (41 mm) | 3.75" (95 mm) | 2 lbs. (.9 kg) | 4 terminations | RJ45 NE-1 RJ45 NE-2 TFA | |
| **Optical Modules** | | | | | | | |
| 12-Fiber ELF Patch Modules | 5.25" (133 mm) | 1.65" (42 mm) | 7.13" (181 mm) | 2 lbs. (.9 kg) | 12 fibers | TFA | |
| 12-Fiber ELF Patch/Splice Modules | 5.91" (150 mm) | 1.65" (42 mm) | 7.97" (202 mm) | 2 lbs. (.9 kg) | 12 fibers | TFA | |
| 24-Fiber ELF Patch Modules | 5.25" (133 mm) | 1.65" (42 mm) | 7.13" (181 mm) | 2 lbs. (.9 kg) | 24 fibers | TFA | |
| 24-Fiber ELF Patch/ Splice Modules | 5.91" (150 mm) | 1.65" (42 mm) | 7.97" (202 mm) | 2 lbs. (.9 kg) | 24 fibers | TFA | |

## Telect