



Powerful DSL Solutions
The Strength of *Two* Telecom Leaders



The GoDigital XCel-4a™ by CTDI

CTDI & GoDigital ADSL Service Advantages

Combining the technical and service expertise of CTDI and GoDigital, The XCel-4a is now supported by the most comprehensive DSL service solution in the telecom industry. Now, GoDigital customers not only have high-quality DSL products, but an expanded DSL service solution that includes network planning, sales and technical support, web-based ordering, system monitoring and world-class DSL maintenance services. CTDI and GoDigital, two leaders in the telecom service arena, will take our commitment to service excellence to the highest level.



Go Farther: GoDigital XCel-4a systems can extend four 1.5 Mbps ADSL services over one copper pair to locations as far as 100,000 feet from the central office. The XCel-4a provides local exchange carriers with an economical and fast solution for delivering ADSL to customers located at distances beyond 12,000 feet from the central office or behind a digital loop carrier.

Go Faster: Line powering and the ease of installation of outside plant equipment allows local exchange carriers to deploy ADSL services as fast as their subscribers request them and quickly generate new revenue streams.

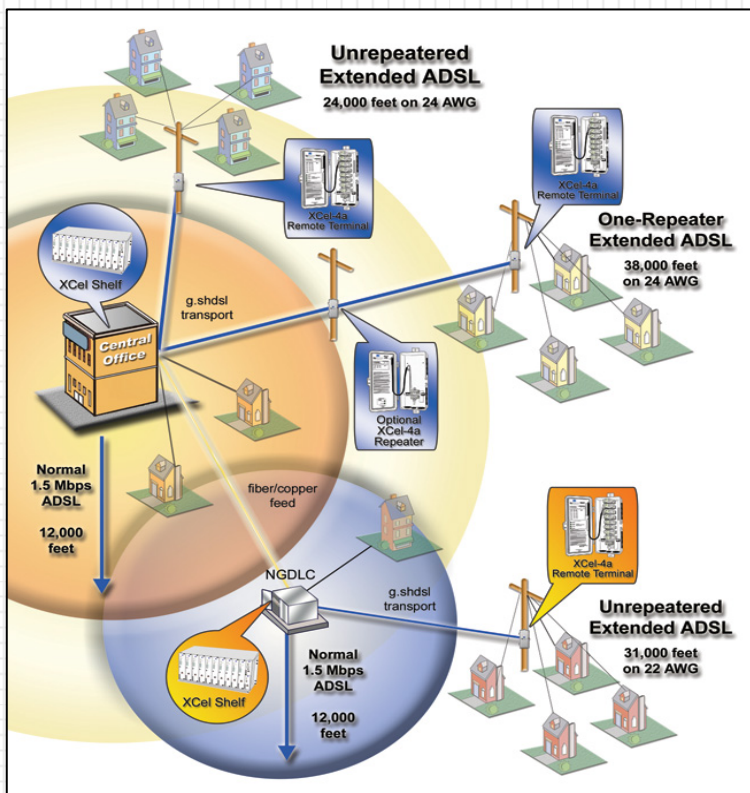
GoDigital: GoDigital Networks is pioneering new territory with its line powered ADSL extension system. The XCel-4a can deliver high-speed ADSL service to all potential subscribers regardless of distance from the central office. GoDigital systems also pay off for local exchange carriers by creating multiple services on a single copper pair. GoDigital is the most cost-effective alternative to deploying more fiber, copper wire, or installing other expensive network equipment.

XCel-4a Features

- Long Reach ADSL
- POTS and ADSL combined at RTU
- High pair gain of 4:1
- Line powered
- G.shdsl transport
- Fully transparent to the existing network
- Downstream 1.5 Mbps bursting with 384 Kbps guaranteed.
- Upstream 384 Kbps guaranteed
- Advanced diagnostics
- Compatible with existing DSLAM and CPE equipment
- Compatible with existing XCel Multi-Service Shelf

XCel-4a Benefits

- ADSL service to any location in the network
- Single drop for both ADSL and POTS
- Fast relief from held orders
- Shorter time to revenue
- Spectrally efficient line code
- No change to the existing provisioning system
- Quality of Service
- Decreases operational cost
- No change to selected DSLAM or CPE equipment
- No new common equipment for current XCel-8 and XCel-12 deployments



Extends four 1.5 Mbps ADSL services over one copper pair to locations as far as 100,000 feet from the Central Office

Contact Information

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The GoDigital XCel-4a™ by CTDI

Line Rate	1.544 Mbps
Line Code	G.shdsl
Line Attenuation	<41.5 dB per span @ 230 kHz
Line Power Feed	A2 class for ±130V, A3 class for ±190V
Voltage	±130 or ±190 volts DC
Max Current	98 mA
Safety	± 130V systems - 5 mA tip/ring to ground, GFI ± 190V systems - 10 mA tip/ring to ground, GFI

All OSP elements can be powered from the central office.
No local power is required.

Configur8r™ System Design Software is available for system and loop configuration. It runs on Microsoft Excel.

XCel-4a Central Office

Terminal Shelf and CTU Line Cards

Powering	-48 Vdc battery
DSL Power Supply	On each CTU card
Common Cards	Alarm and Control Unit
Modularity	8 cards per 19" shelf, 10 per 23" shelf
Fusing	20 Amp, two per shelf
Card Insertion	Hot-loadable
NEBS	Meets GR-63 and GR-1089
NEBS Certification	Level 3 by Independent Certification Lab

Mechanical Data

COT- Multi-Service Shelf	19" W (or 23" W) x 11.5" H x 12" deep
STR	7" W x 15" H x 5" deep, 3.0 lb. Weight
STRM	75" W x 2.5" H x 6.5" deep, 1.0 lb Weight, 239
Mechanics	
RTU	7" W x 15" H x 5" deep, 5.3 lb. Weight

Environmental

Central Office Equipment	-40°C to 65°C, 95% RH non-condensing
Outside Plant Elements	-40°C to 65°C, 95% RH non-condensing
OSP Element Protection	3-element Protectors, Field Replaceable

Outside Plant Equipment

Powering	From the DSL pair
Package	Pole /Wall mountable enclosure
Visual LED Indications	Power/ link, CPE (x4)

XCel-4a Interface

Number of subscribers per XCel-4a system	4 subscribers
ADSL DSLAM Interface	G.DMT G.lite ANSI T1.413
ADSL+POTS	Combined in RTU 4A



XCel-4a System Equipment List

XCel Multi-Service Shelf and Common Equipment

19" Multi-Service Shelf	990117-A	8 CTU 4A card capacity for 19" racks
23" Multi-Service Shelf	990118-A	10 CTU 4A card capacity for 23" racks
Alarm and Test Card, ACU	990249-B	One ACU per Multi-Service Shelf
Single Service Access Shelf -CTU	990422	1 CTU 4A card capacity for remote cabinets
Single Service Access Shelf -ACU	990443	One ACU capacity for remote cabinets (Optional for SSA-CTU)
XCel Advanced Diagnostics	990355	Advanced Diagnostics PC Application Compact Disk

XCel-4a Shelf Modules

Central Terminal Unit, CTU 4A 130	990197	± 130V XCel-4a Line Card, 4 ADSL services per pair
Central Terminal Unit, CTU 4A 190	990263	± 190V XCel-4a Line Card, 4 ADSL services per pair

XCel-4a Remote Terminals and Repeaters

Straight Through Rptr, Outdoor STR 4A	990262	Line powered repeater
Straight Through Rptr Mod, 239-Type plug	990286	Line powered repeater module
Straight Through Rptr Local Power, Outdoor	990325	Locally powered repeater SELV DSL Transport
Remote Terminal Unit, Outdoor, RTU 4A	990198-A	Remote Terminal Unit with built in splitter (4 subscribers) and Gel Protection Terminals
MSR-16a w/710 connector	990413	MSR-16a line powered multi-service remote base (16 subscribers requires (4) 990408)
MSR-16a w/4005 connector	990414	MSR-16a line powered multi-service remote base (16 subscribers requires (4) 990408)
MSR-32a w/710 connector	990415	MSR-32a line powered multi-service remote base (32 subscribers requires (8) 990408)
MSR-32a w/4005 connector	990416	MSR-32a line powered multi-service remote base (32 subscribers requires (8) 990408)
XCel-4a RemoteElectronics Module	990408	XCel-4a remote electronics module with built-in splitter (4 subscribers)

Cable Stub Kits for XCel-4a

Cable Stub Kit, 10 Pair, STB10	990092	Stub Kit, 20 feet, for RTU 4A
Cable Stub Kit, 6 Pair, STB6	990093	Stub Kit, 20 feet, for STR 4A
Cable SSA Shelf with 5PIN Modular Conn	990430	Cable optional with SSA-CTU supporting one CTU 4A