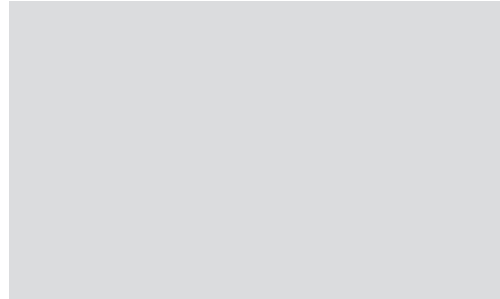


# Unbundled Network Elements (UNE) Transport Product Guide

All terms and conditions detailed in these Guidelines are subject to change pending future action by the FCC or individual state regulatory commissions.



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## Product Overview

With over 100 years in the business, Sprint is committed to providing superior wholesale connectivity, services and products. Sprint Wholesale Markets integrates simplicity and technology — delivering innovative business solutions and one single point-of-contact for ordering, provisioning and billing.

The Sprint Unbundled Network Element (UNE) Interoffice (IOF) Transport product provides transmission between central offices. At least one collocation, physical or virtual, per Local Access Transport Area (LATA) is required to purchase UNE transport in the Sprint Central Office. Sprint offers two types of UNE-IOF transport: common and dedicated.

- Dedicated IOF transport is a facility used by a single carrier.
- Common IOF transport is a facility shared by multiple carriers.

## Product Details

### Common Transport

Sprint offers unbundled access to common transport where unbundled local circuit switching is provided. Transmission facilities are shared by Sprint and other carriers, may be switched at a tandem, and are located between:

- End office switches.
- End office switches and tandem switches.
- Tandem switches in the Sprint network.

Common transport is available at DS0, DS1 and DS3 transmission levels. Higher Optical Carrier-level (OC) circuits are available via the Individual Case Basis (ICB) process. Further information about the ICB process can be obtained via the Account Manager.

## Product Details

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### Dedicated Transport

Where technically feasible and available, Sprint offers unbundled access to dedicated IOF transmission facilities (dedicated transport). Dedicated Sprint IOF transmission facilities are provisioned to Competitive Local Exchange Carriers (CLEC) that provide telecommunications services between wire centers:

- owned by Sprint or the requesting CLEC, or
- between switches owned by Sprint or the requesting CLEC.

Dedicated IOF transport provides exclusive access to DS0, DS1 and DS3 service levels and does not require switching at a tandem. Higher OC-level circuits are available via the Individual Case Basis (ICB) process.

- **DS0 Service** – Unbundled dedicated DS0 transport consisting of a two-point digital channel that provides for simultaneous two-way transmission of digital electrical signals at a transmission rate of 64 kilobits per second (kbps).
- **DS1 Service** – Unbundled dedicated DS1 transport consisting of a two-point digital channel that provides for simultaneous two-way transmission of digital electrical signals at a transmission rate of 1.544 megabits per second (Mbps).
- **DS3 Service** – Unbundled dedicated DS3 transport consisting of a two-point digital channel that provides for simultaneous two-way transmission of digital electrical signals at a transmission rate of 44.736 Mbps.

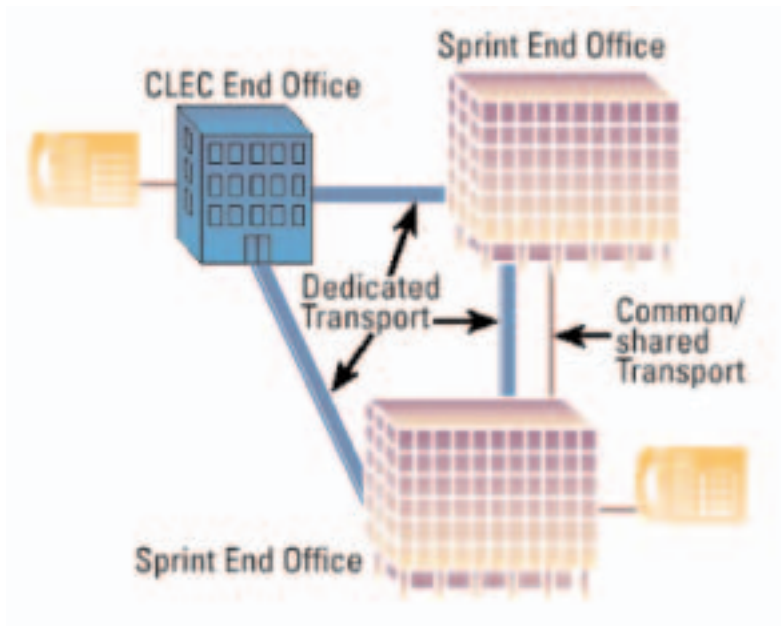
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## Product Details

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### Dedicated and Common Transport Diagram

Below is a diagram displaying dedicated and common transport elements:



### Multiplexing

A multiplexer is a hardware device that combines a number of lower level channels into one high-speed channel at one end of a transmission path and divides it back into low-speed channels at the other end. Multiplexing is offered at the levels as defined below:

- **DS3/DS1 Multiplexing**

The Digital Signal Level 3 (DS3) central office multiplexer provides de-multiplexing from one DS3 (44.736 Mbps) to 28 Digital Signal Level 1 (DS1) (1.544 Mbps each).

- **DS1/DS0 Multiplexing**

The DS1 central office multiplexer provides de-multiplexing from one DS1 (1.544 Mbps) to 24 (64 kbps) data channels or 24 (56 kbps) voice channels.

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## Product Details

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### Collocation

Collocation provides the CLEC with space and associated services, such as power and environmental conditioning. Collocation allows the CLEC to locate equipment and terminate facilities to interconnect to Sprint services. Collocation can be either physical or virtual.

### Collocation Pricing

In order to purchase collocation, a CLEC must have a Master Interconnection and Resale Agreement with collocation language or a stand-alone Master Collocation License Agreement with Sprint. Rates are obtained from the CLEC agreement or applicable tariff. For a rate element not listed in the agreement or tariff, an Individual Case Basis (ICB) is required.

### Cross Connects

Access to unbundled dedicated DS1 transport flows from the CLEC central office or collocation arrangement with Sprint through an appropriate cross-connection made on the Digital Signal Cross-Connect (DSX) panel.

DS0, DS1 and DS3 level cross-connects connect IOF transport. Cross connects provide a connection between cabling runs, subsystems and equipment using patch cords or jumpers that attach to connecting hardware on each end. Rates for cross connects are available in the Master Interconnection and Resale Agreement, the appropriate collocation tariff or via the Account Manager.

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## Rate Element Application Table

The Master Interconnection and Resale Agreement provide dedicated and common transport rates. Transport rates are priced by route, are based on an 11-digit point-to-point Common Language Location Identification Code (CLL) combination, and vary by state. Rates include both the applicable facility (fixed and variable) and termination charge(s).

The table below indicates how the UNE transport rates are applied, such as Monthly Recurring Charges (MRC), Minutes of Use (MOU), Nonrecurring Charges (NRC), and whether an ICB is required for the service.

Rate Element/Definition	NRC	MRC	MOU	ICB
Interoffice Transport – Dedicated Transport Facility between Sprint switches – DS1/DS3 per route by originating to terminating central office	Y	Y		(1)
Interoffice Transport – Dedicated Transport Facility between Sprint switch and CLEC switch – DS1 Intraexchange Interconnection Facility	Y	Y		
Interoffice Transport – Dedicated Transport Facility between Sprint switch and CLEC switch – DS3 Intraexchange Interconnection Facility	Y	Y		Y
Common Transport	N	N	Y	
Multiplexing - 3/1 and 1/0 per multiplexer	N	Y		
Digital Signal Cross Connect (DSX) – with Collocation	N	Y		(2)
Switchboard Cable – with Collocation	N	Y		(2)
DS1 Facility Cross Connect – no Collocation	N	Y		
DS0 Electrical Cross Connect (DS0 UNECC)	N	Y		
DS1 Electrical Cross Connect (DS1 UNECC)	N	Y		
DS3 Electrical Cross Connect (DS3 UNECC)	N	Y		

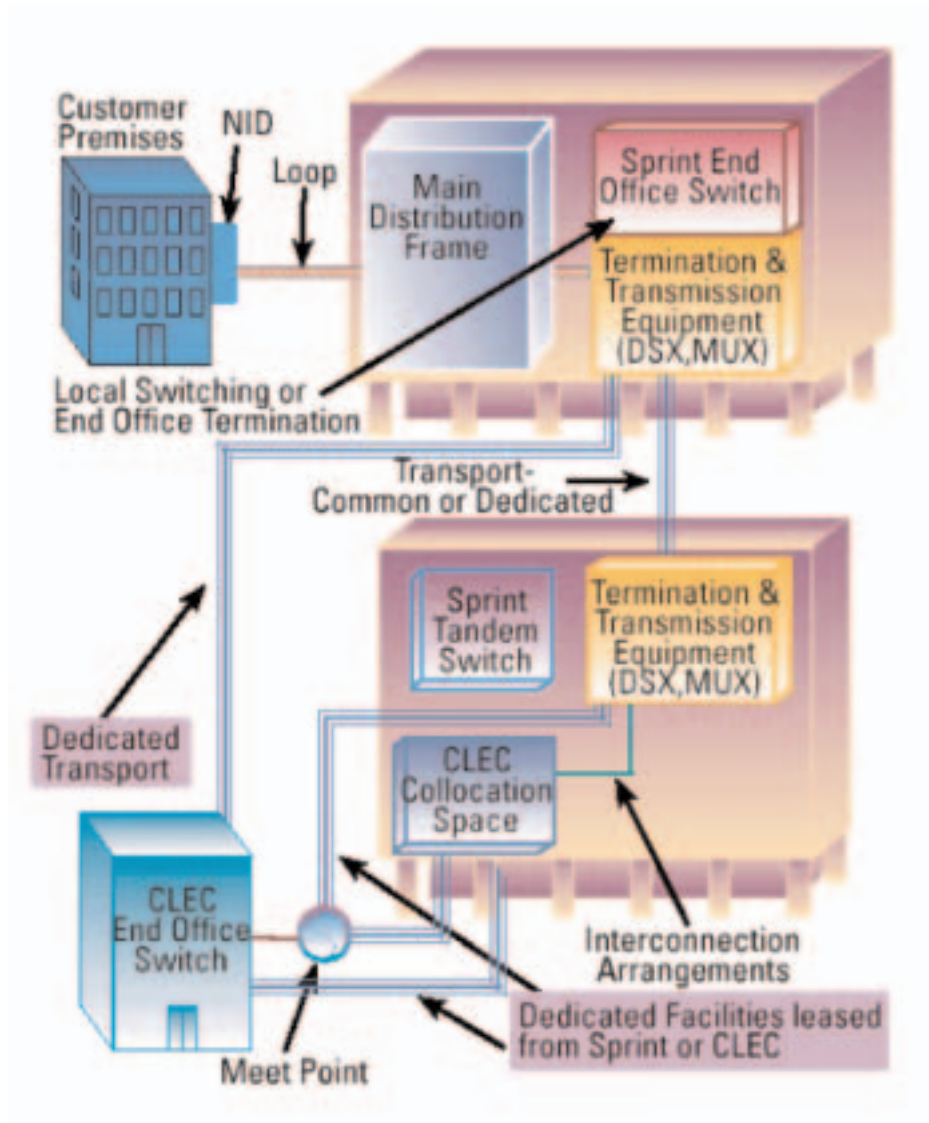
**Note:**

(1) For routes not listed in the agreement, an ICB will be required.

(2) If pricing is not available in the tariff, an ICB will be required.

## Transport Rate Elements Diagram

The diagram below displays the most common rate elements used to combine transport service. Collocation is shown in the Sprint Tandem Switch office. CLECs may also collocate in the Sprint End Office where unbundled local circuit switching is available.



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## Ordering Requirements

Following is a summarized list of requirements a CLEC must meet before placing transport orders with Sprint:

- An executed Master Interconnection and Resale (I&R) Agreement with Sprint
- An executed Collocation Agreement (if not included in the I&R agreement)
- Local Carrier Identification Code (CIC)
- Implementation Checklist is completed and forwarded to local account manager
- Network diagram, if applicable
- Implementation meeting has been held

## Ordering Process

Transport is ordered via an Access Service Request (ASR) and submitted to the appropriate Sprint National Access Service Center (NASC). Questions regarding how to place orders or inquiries about the status of existing orders should be directed to the NASC assigned by the Account Manager during the implementation meeting.

The table below provides an overview of critical fields that must be completed on the ASR, as well as necessary information to ensure the transport order processes run smoothly, and the order is not rejected or delayed.

Sprint must receive proper documentation before processing an ASR from the CLEC. Refer to the *Ordering Requirements* section of this document for more information.

	Critical ASR Fields & Order Information
<b>NC Code</b>	If ordering local trunks, position 3 of the Network Channel (NC) code should be a "U". "S" and "X" are acceptable codes as well. Refer to Telcordia for additional guidance for population of the NC code. For information regarding ordering Telcordia Technologies documentation, visit: <a href="http://www.telcordia.com">www.telcordia.com</a>
<b>PLU</b>	When ordering local service, complete the Percent Local Usage (PLU) and Company Code (CC) fields. If ordering transport for Internet Service Provider (ISP) traffic, consult the local account manager to determine whether Access or UNE rates apply.  If ordering facilities, the PLU should be 100% and PIU 0%, and the Operating Company Number (OCN) should be completed in the CC field.

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## Ordering Process

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	<b>Critical ASR Fields &amp; Order Information</b>
<b>CIC or OCN</b>	If the CLEC is also an Interexchange Carrier (IXC), and the ASR is ordering local service, the local CIC or OCN must be provided on the ASR. NOTE: Do not use the IXC CIC.
<b>UNE</b>	UNE field = 'Y' is required for UNE service.
<b>NC/NCI</b>	Applicable Network Channel and Network Channel Interface (NC/NCI) codes are available via Telcordia.
<b>CLLI Code</b>	11-digit Common Language Location Identifier (CLLI) Codes are required.

For further guidance on specific industry-standard fields to complete the ASR, contact the Alliance for Telecommunication Industry Solutions (ATIS) [www.atis.org](http://www.atis.org).

Membership to ATIS is required to access transport industry-standard ordering and provisioning guidelines online. Membership instructions are available on the site. ATIS membership also provides admittance to the Ordering and Billing Forum (OBF). OBF offers an industry forum for telecommunications providers to identify, discuss and resolve national issues affecting ordering, billing, provisioning and the ability to exchange information regarding access services.

## Invoicing Process

Transport elements, including collocation, are invoiced through the Sprint Customer Access Support System (CASS). Transport rates are obtained from the Master Interconnection and Resale Agreement. Depending on the order placed, the table below displays the transport elements that could appear on your invoice:

<b>Billing Element</b>	<b>NRC</b>	<b>MRC</b>	<b>MOU</b>
Service Order	Y	N	N
Transport – Dedicated	Y	Y	N
Transport – Common	N	N	Y
Multiplexing	Y	Y	N
Cross Connects	N	Y	N
High Frequency tie-cable	N	Y	N

### CASS Transport Route Process

The RT000 Universal Service Order Code (USOC) identifies the service as Transport. The originating and terminating transport route is entered into CASS and a BAND, which contains the price for the route, is assigned. This process ties the BAND directly to the transport route for invoicing.

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## Access to UNE Transport Conversion Guidelines

Circuits converted from special access to UNE Transport must carry a significant amount of local traffic, per the Federal Communications Commission (FCC). A list of the circuits to be converted must be provided to the local account manager. The local account manager works with the CLEC to ensure the CLEC Implementation Checklist and Account Profile is updated (if required) prior to scheduling a conversion meeting.

The purpose of the conversion meeting is to communicate the various steps and requirements for converting access circuits to UNE Transport. Sprint Access to UNE transport conversion process steps are provided in the table below:

Step	Action
1	The CLEC provides the Account Manager with a list of the access circuits they want to convert to UNE Transport.
2	Sprint Wholesale Markets operations and billing confirms the services the CLEC wishes to convert qualify for the UNE conversion. Operations provides the local account manager with a list of any services that are not eligible for conversion.
3	The CLEC writes all ASR orders. All orders should include the related PON for the associated order to reduce opportunities for disconnects.
4	The local account manager notifies the CLEC of the associated Nonrecurring Charges (NRCs).
5	A project ID is identified. The project ID should follow this syntax: “%%&CIRCONLOOP” where %=4-digit OCN and &=2-digit State abbreviation. This project ID must be completed on each disconnect and install order.
6	The service centers determine the schedule for order processing. Typically, the service center will allow up to five circuits per day (or up to 10 orders).
7	The service centers identify intervals for disconnect and install ASRs.

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## Frequently Asked Questions

Number	Question	Answer
1	Is collocation required for transport?	Yes, one collocation per LATA is required.
2	How is an ICB submitted to cost a transport route not priced in the Master Interconnection and Resale Agreement?	The Local account manager submits requests for ICBs. Point-to-point 11-digit CLLI codes are needed to price the transport route(s).
3	Do special access term discount plan liabilities apply if special access transport services are converted to UNEs?	Yes, UNE conversion charges apply as well. These rates are obtained from the Master Interconnection and Resale Agreement or through the Local Account Manager.
4	Is a CLEC collocation considered a wire center?	No. A wire center is defined as a physical structure where the phone company terminates subscriber phone lines. It's also defined as a class 5 switch.
5	Can a CLEC order UNE transport from collocation to collocation?	Yes. As long as the CLEC establishes a minimum of one Physical POI within each LATA, at any technically feasible point.

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## **Why Sprint?**

With a rich heritage more than a century strong, Sprint remains one of the most financially stable companies in the telecom industry. When you choose Sprint, you're choosing a global company that wins industry and customer accolades for service reliability and customer satisfaction and one that is committed to developing solutions that can transform the way you get business done.

**Please contact your Sprint  
Account Manager.**

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