

## Announcing Remote Expansion Cabinet Capabilities for Strata DK424

Toshiba is very pleased to announce another exciting new capability for the Strata DK424 digital business telephone system. Remote expansion cabinets meet the needs of many distributed configurations that effectively extend station loop distances and, in some applications, can eliminate the need for multiple telephone systems. Reliable, fiber-connected, remote expansion cabinet applications create a significant competitive advantage.

### Description

A Strata DK424 may have as many as six of its expansion cabinets installed in locations remote from the base cabinet. Remote Cabinet Interface Units mounted in slots in the base and remote expansion cabinets use fiber optics to extend the data cables that normally connect cabinets to each other. Using a properly installed, 500 MHz/km, multi-mode fiber, an expansion cabinet may be installed up to three cable kilometers (1.8 miles) from the base cabinet.

Feature operations for all users in the system is the same regardless of whether they are served by local or remote expansion cabinets. The remote expansion cabinet is a mechanical solution and has no affect on software or administration. Expansion cabinets support all Strata DK424 station and trunk interfaces same whether connected locally or remotely. The fiber optic connection is specified as follows:

Item	Specifications
Transmission Speed	155.52 Mbps
Fiber Type	Multi-mode, Graded Index Fiber (GIF)
Core Diameter	62.5 micrometer
Cladding Diameter	125 micrometers
Connector Type	SC (Transmit & Receive)
Maximum Fiber Length	3 km or 1.86 miles (500~1000 MHz/km Fiber) 2 km or 1.24 miles (200~400 MHz/km Fiber)
Optical Loss Budget	9 dB (One Way)
Minimum Bend Radius	30 mm (1.18 inches)

## New Hardware

The Remote Cabinet Interface Unit (RRCU) is a new PCB that makes remote expansion cabinet connection possible. Remote expansion cabinet applications require at least two RRCU cards: one installed in the base cabinet and one in the remote expansion cabinet.

In the base cabinet, up to two remote cabinet (RDCL1A) data cables that are normally connected to expansion cabinets are connected to front edge connectors on each of the RRCU cards. The RRCU has an SC (Transmit & Receive) connector for the pair of fiber optic strands extending to the remote location. A maximum of five pairs of RRCU cards may be installed per system (see [Figure 1](#)).

A standard Strata DK424 expansion cabinet is installed at the remote location equipped with one RRCU. One fiber pair can support one or two expansion cabinets in one remote location, so the RRCU may support another remote expansion cabinet in addition to the one in which it is installed at the same location (see [Figure 1](#)). The data cable(s) connect from the front edge connector of the RRCU to the connector(s) at the left side of the expansion cabinet(s). The fiber optic strands from the base cabinet connect at the SC (Transmit & Receive) connector on the RRCU.

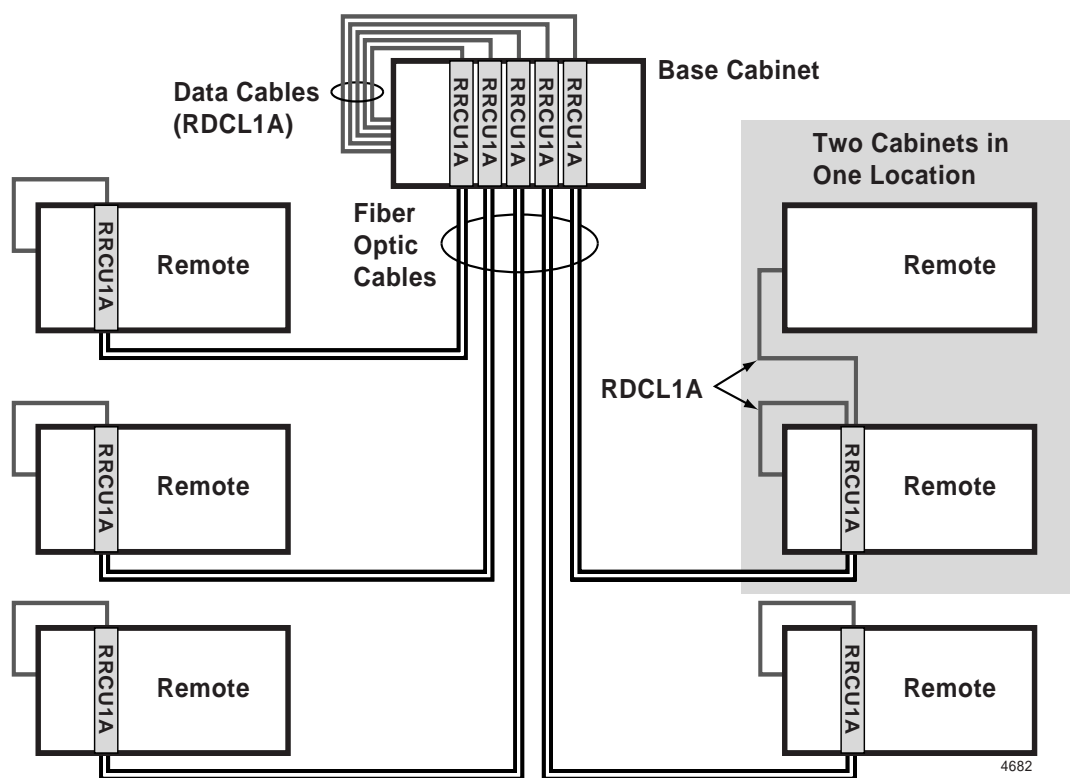


Figure 1 Configuration for the Maximum Number of Remote Cabinets for DK424

The RRCU has two power failure circuits for activation of two 8-circuit Power Failure Transfer Units (DPFT) in the event of a signal failure over the fiber optic connection. The RRCU is also equipped with an RS-232C maintenance port and LEDs to monitor the fiber connection.

Here are a few installation considerations:

- ◆ Conversion of a local expansion to a remote expansion cabinet requires no software change in system programming for that expansion cabinet.
- ◆ The remote expansion cabinet supports the same interfaces as a locally connected expansion cabinet including digital trunks. However, digital trunks connected to remote expansion cabinets cannot be the source of public network clock extraction.
- ◆ The RRCU is a non-timeslot card. As such, it can be installed in any slot, including slots 7 and 8 of any cabinet and vacant slots created adjacent to digital trunk cards.
- ◆ Power is supplied to remote expansion cabinets according to existing expansion cabinet specifications. The RRCU has a power factor of 4.5 for cabinet power calculations.
- ◆ Top covers (RCTC1A) and floor mounting brackets must be ordered separately from the expansion cabinets. Since the standard Strata DK424 expansion cabinets are designed to be mounted to the base cabinet, they do not come with top covers.

## Applications

- ◆ Remote expansion cabinets allow a Strata DK424 to serve wide areas such as campuses, resort complexes, and skyscrapers with a single telephone system. This greatly extends the effective station loop distances and can sometimes eliminate the need for multiple systems. A single telephone system can be supported by one call accounting system, one property management system, one voice mail, one programming/maintenance interface, and one ACD.
- ◆ The remote expansion cabinet may also be used to overcome cabling problems such as congested conduits. By using a spare fiber optic pair in the campus fiber system, a remote expansion cabinet can support 56 telephones that would ordinarily require installation of a 75-pair cable.
- ◆ If there is no wall or floor space to expand an existing system, a remote expansion cabinet can be installed on another wall, in another room, or in another building without disrupting the existing installation.

## Compatibility

Remote expansion cabinets with RRCU cards are compatible with Strata DK424 systems with Release 3 or later software.

## Pricing

The remote expansion cabinet capability using the RRCU is priced to be very cost effective. See the Strata DK424 section of the new *Strata DK Authorized Toshiba Dealer Price Book* for details. The new *Strata DK Authorized Toshiba Dealer Price Book* can be downloaded from the FYI Internet Site.

## Documentation

All existing Strata DK documentation is being updated to include the new Remote Expansion Cabinet Unit (RRCU) interface and will be available for download from FYI Internet by product release. This includes the *Strata DK Installation & Maintenance Manual* (see Chapter 5).

Also, a new Strata DK424 brochure has been created and is enclosed with the remote expansion cabinet launch package.

## Availability

The Remote Expansion Cabinet Unit (RRCU) is scheduled to begin shipping in early November. You can place your order now.