AMANO®

Nexus 220 Software Guide

ANX-102600

nexus 220

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At a Glance

Part I – Hardware

Part I provides a limited overview of related Hardware compatible with the Nexus 220 System. This section also includes a breakdown of the available Hardware combinations and System size limits.

Part II – Software

Part II provides an overview of the Nexus 220 System, including the basic steps for installation and pre-configuration.

Part III – General Configuration

Part III provides the nuts-and-bolts procedures for Nexus 220 Software configuration. The numbered headings indicate the steps critical to the initial configuration as well as the performance sequence. Everyday tasks are also described in detail in this section.

Part IV – Reports

Part IV provides an overview of the Reports available in the Nexus 220 System, the application of these to single or multiple Sites, and the basic steps for running the Reports.

Part V – Advanced Configuration

Part V outlines “advanced” tasks not covered in Parts I, II, III and IV. Much of the information in this Part is not required for everyday configuration.

Part VI – Nexus 220 Software Modules

Software Modules form the core of the Nexus 220 Software and provide control of everyday and other important functions. Part VI contains information on the various additional Software Modules not covered in Parts I, II, III and IV.

Part VII – Utilities

Part VII contains information on the Nexus 220 Utilities that let you to perform administrative and maintenance tasks for the core Nexus 220 components.

Part VIII – Integration Modules

Part VIII outlines the steps required when integrating other supported systems with Nexus 220.

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Introduction

This manual is intended to assist the installer during the installation and configuration stages of the Nexus 220 System. It is not designed as an operational manual for the end-user.
This manual is structured to assist the installer with configuring the basic components of the System first, followed by advanced features and functions.

Document Conventions

The following conventions are used in this document:

Note—indicates additional information about a topic

Tip—indicates suggestions and alternative methods to perform tasks

Important—indicates important information

Warning—indicates potential danger to you or the product

Terminology

The following terminology is used in this document:

Amano-Specific Terminology

- **Nexus 220**—the commonly used name of the **Nexus 220** Series Software Suite. The term describes an access solution as a whole; it encompasses all Hardware, Software, and third-party applications.
- **Amano Hardware**—the hardware units comprising a **Nexus 220** System. The major Amano components are Controllers, Terminals, and Tag Readers.
- **Tag**—the passive, proximity component used as a unique identifier in an Nexus 220 Access Control System.

Country-specific Terminology

Different countries use different words to name or describe the same thing. **Table 1** lists the International terms and their American equivalents used in this document.

International	American	British
Lift	Elevator	Lift
Ground/Grounding	Ground/Grounding	Earth/Earthing
Tag	Card	Tag
Registration	Enrollment	Registration
Registration Reader	Enrollment Reader	Registration Reader
Screen/Screening	Shield/Shielding	Screen/Screening

Table 1 – Area-specific Terminology

In some cases, terms are used inter-changeably.

Supported Software and Firmware Versions

This release of the **Nexus 220 Software Installation Guide** applies to the following Amano Software and Firmware versions, as well as any later versions that do not affect the contents of the Guide. This Guide will be updated when significant changes occur.

Nexus 220 Software Suite	**V1.80**
Amano Nexus 220 Controller	**V2.00**
Amano ISR Nexus 220 USB Registration Reader	**V1.16**
Amano RS Registration Interface	**V1.16**
Amano TA Time Attendance Terminal	**V7.20**
Amano I16 Input Terminal	**V7.22**
Amano O16 Output Terminal	**V7.22**
Wiegand 125 kHz Passive Proximity Readers	**V1.06**

PART I – HARDWARE

Nexus 220 Hardware Components

Amano Units for use in a Nexus 220 System

Interface Devices

Unit	Description	Part Number
Amano RS	Registration Interface	XRS902-1-0-AC
Amano RRA	Antenna Reader for the Amano RS	XPR901-1-0-AC
Amano ISR	Nexus 220 USB Registration Reader	ISR900-1-0-AC

Controllers

Unit	Description	Part Number
Nexus 220 Stand-alone Controller	Controller in the Nexus 220 System	Nexus-220/A867
Nexus 220 System Controller	Controller in the Nexus 220 System	Nexus-220/A868

Terminals

Unit	Description	Part Number
Amano TA	Time Attendance Terminal	XDB902-1-0-AC
Amano I16	Input Terminal	XIT900-0-0-AC
Amano O16	Output Terminal	XOT900-0-0-AC

Wiegand Readers

These Wiegand Readers are for use with the Nexus 220 Controller and Amano RS.

Unit Description	Part Number
Wiegand Plastic Non-keypad 125 kHz Passive Proximity Reader	WPR900-1-0-AC
Wiegand Plastic Keypad 125 kHz Passive Proximity Reader	WPK900-1-0-AC
Wiegand Plastic Keypad Mullion 125 kHz Passive Proximity Reader	WKM900-1-0-AC
Wiegand Metal Non-keypad 125 kHz Passive Proximity Reader	WMR900-1-0-AC
Wiegand Metal Non-keypad 125 kHz Passive Proximity Reader	WMK900-1-0-AC

Receivers

Unit	Description	Part Number
Amano RF	4-Channel UHF Receiver	UHR903-0-1-AC

Table 2 – Amano Units Compatible with the Nexus 220 System

Reader Compatibility

Some Amano units are designed to interface with several types of Readers. These are listed here:

Unit	Interfaces With
Nexus 220 Controller	Two Amano Antenna Readers or two Wiegand Readers

Table 3 – Reader Compatibility

Other Nexus 220-compatible units are under development.

Hardware Combinations and System Size Limits

System Parameters

Description	NEXUS220-1 Single APB Door or 2 non-APB Door System	NEXUS220-2 4 APB Door System	NEXUS220-3 64 APB Door System	Additional functionality available through upgrade modules:
Total Number of Tags	1 000	2 000	10 000	
Total Buffered Transactions	100 000	100 000	100 000	
Sites per System	1	1	1	1 000
Controllers per System	1	4	64	
Terminal Fixed Addresses per Controller	2	2	2	
Terminal Fixed Addresses per Door (Location)	2	2	2	
Doors (Locations) per Zone	32	32	32	
Zones per Controller	32	32	32	
Actions Supported	256	256	256	
Doors (Locations) per Controller	2	4	32	
Tags per Tagholder	4	4	4	
Tagholder Access Groups	64	64	64	
Operating Voltage	18 V DC – 32 V DC 16 V AC – 24 V AC	18 V DC – 32 V DC 16 V AC – 24 V AC	18 V DC – 32 V DC 16 V AC – 24 V AC	
Controller Communications Baud Rate	100 Mbps when using TCP/IP	100 Mbps when using TCP/IP	100 Mbps when using TCP/IP	
Terminal Communications Baud Rate	38 400	38 400	38 400	
Digital Inputs – Per Controller (not used for Access Control)	3	3	3	
Onboard Relays – Per Controller	3	3	3	
Lift (Elevator) Control	NA	NA	NA	8
Maximum Fixed Addresses Supported	2 (Per Site)	8 (Per Site)	512 (Per Site)	
Maximum Fixed Addresses Supported - APB Doors	2 (Per Site)	4 (Per Site)	256 (Per Site)	
Maximum Fixed Addresses Supported - Single Reader Doors	2 (Per Site)	4 (Per Site)	256 (Per Site)	
Host PC Communications	RS232, USB or TCP/IP	RS232, USB or TCP/IP	RS232, USB or TCP/IP	
Controller Bus Communications	No	RS485	RS485	
Terminal Bus Communications	No	RS485	RS485	
Maximum number of Controllers per Site	1	4	32	
Tag Registration	Any Reader	Any Reader	USB Registration Reader or Any Reader	
Database	Firebird 2.1	Firebird 2.1	Firebird 2.1	

Table 4 – System Configuration Parameters

Nexus220-3 System is restricted to10 000 Tags per System regardless of the number of Sites. In addition this System are also restricted to 10 000 Tags per Site. This restriction includes Tagholders (Tags) from other Sites with access to the original Site. In other words, Site A can have up to 10 000 Tags, Tagholders from Site B with access to Site A are therefore included in Site A's total Tag count.

All figures provided are the maximum. In some cases interdependence between parameters; that is the maximum number of Zones per Controller depends on how many Terminals are used per Location.

Unlock System Nexus220-3 for up to 1 000 Sites per System and 8 Lifts (Elevators) using the Multi-site and Elevator Control Licences.

USER NOTES

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