POSTEK **TX Exp** Series

MULTI-DIMENSIONAL INTERACTIVE SMART PRINTER



STANDARD SIZE INDUSTRIAL STRENGTH

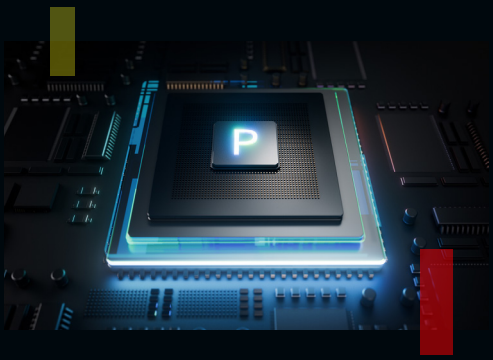
The TX Exp Series defines the standard industrial form factor for POSTEK printers — compact enough for most production environments, yet powerful enough for 24/7 industrial workloads.

Its patented fixed-frame engine ensures structural rigidity and sustained precision, while its intelligent control system and connectivity make it a reliable workhorse for modern labeling operations.

MULTI-INTERACTIVE & SMART PRINTING

Overview

Across every model, POSTEK's Multi-Interactive Smart Printer architecture connects intelligence with industrial strength. These printers don't just execute print jobs — they communicate, coordinate, and even automate. From Python-based OX Script customization to cloud database access, POSTEK printers evolve from peripherals to intelligent hubs — becoming the brains of the operation in the connected manufacturing world.



Power at Its Core

Equipped with a quad-core 1.8 GHz MPU and a GPU supporting 2D and 3D hardware acceleration, offering unparalleled power and graphics processing capabilities.

Ultra-large memory (2GB + 8GB) for storing all your data: graphics, fonts, pictures, custom programs, data sheets, and more. Whatever you need, the TX Exp has you covered.

Smart Assistant AVA

Powered by the latest DeepSeek model, AVA offers clear, real-time guidance for your printing tasks, quickly identifies issues, and connects you to POSTEK tech support when needed.





OX Script: Open Architecture Engine

A powerful tool for building customized, interactive apps that runs directly on the printer, allowing for features specific to your application.



VisualGuard™

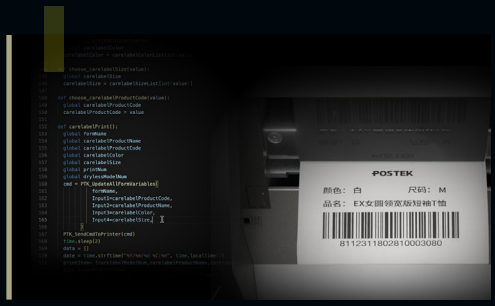
A visual verification system directly on the device, providing fast and accurate real-time analysis of the printout. Ensuring every label on every roll meets your standard.

* This advanced module is optional.

Cloud Connectivity & Offline Operation

TX Exp Series provides cloud connectivity and offline operation with advanced stand-alone capability, enabling direct communication with cloud documents, broad device compatibility, and seamless control of peripheral devices.



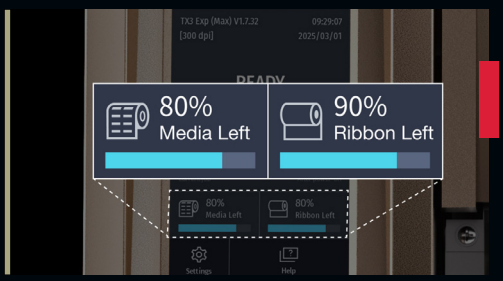


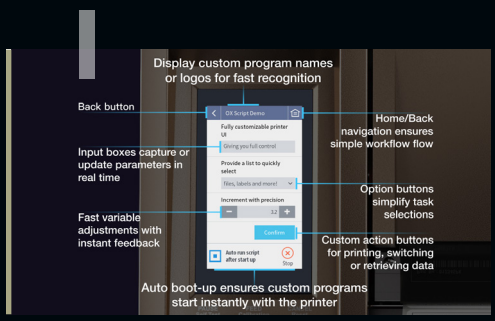
MES/ERP Integration

OX Script introduces a new way of connecting with MES/ERP systems by making the printer the operational hub. This allows for flexible handling of complex tasks. Whether adding new variables or adjusting formatting, you can do it directly on the printer, making required updates independent of complex MES/ERP system upgrades.

Device Management Features

A streamlined system that lets you check consumables instantly, manage accounts securely, switch label sizes quickly, maintain precise printing, and adjust label positioning with ease.





An Intuitive, Personalized User Interface

With a drastically simplified development process, OX Script provides unprecedented user-friendliness by enabling the creation of intuitive, personalized interfaces specific to each user's application.

FEATURES

HEAT™ Technology

Powered by one of the most advanced quad-core applications processors, the POSTEK TX Exp series printer takes full advantage of the cutting-edge HEAT™ printing technology, providing the best in class printout qualities. Intelligent thermal control ensures pixel-perfect consistency and sharpness in every print.



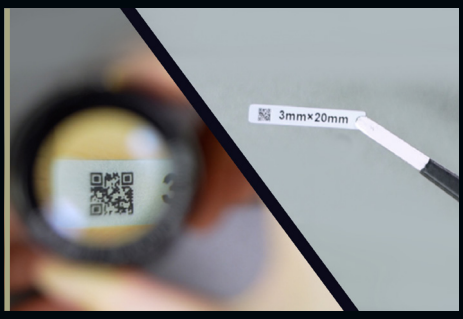


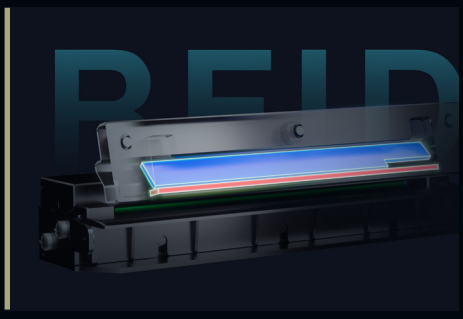
Advanced Dynamic Adaptive Precision Tuning

Ensures vertical printing accuracy with a calibration precision of ±0.3mm over a 200mm print length, achieving up to ±0.1mm under optimal conditions. It effectively eliminates printing distortion caused by platen wear, paper thickness changes, or surface friction differences. This significantly enhances component durability and reduces the frequency of platen roller replacements.

Ultra-Small Label Printing High-Precision Output

With a high-resolution printhead, precise transmissive/reflective sensors, stable HEAT™ printing technology, and reliable ADAPT™ media calibration, the printer delivers accurate output even on millimeter-sized labels.
Ideal for precision manufacturing where small labels carry big information.





The New Standard in RFID Printing: Fast and Precise

POSTEK's innovative dual-antenna RFID design enables simultaneous reading and printing, eliminating pauses and errors common in traditional RFID printing. With the proprietary SmartTagVerify Pro system, data and errors are monitored in real time, ensuring every print is reliable and accurate.

* Available for TXr Exp



Fixed Print Engine Frame Design

Engineered for heavy-duty, 24/7 industrial environments. POSTEK's fixed print engine frame adopts a fully enclosed, double-side-supported structure that fundamentally reinforces structural integrity. Its superior fatigue resistance effectively withstands long-term cyclic stress, ensuring consistent print accuracy and operational reliability.

Integrated Peel-and-Rewind Module

Enhanced with the integrated peel-and-rewind module on the TX Exp (Max), the printer delivers powerful performance in a compact body — fully featured, versatile, and flexible for various applications.

* This module is optional and applies only to the TX Exp (Max).





Quick-Set Ribbon Tension System

A user-friendly mechanism that enables fast, precise, and hassle-free tensioning.

Dual-Size Media Core Adapter

Enables quick switching between 1.5-inch and 3-inch cores, providing the flexibility to handle a variety of printing tasks.



SPECIFICATIONS

Model	TX2 Exp	TX3 Exp	TX6 Exp
Model with RFID	TX2r Exp	TX3r Exp	TX6r Exp
Exterior Color	Dune Gold or Obsidian Black		
Print Mode	Direct Thermal and Thermal Transfer		
Print Resolution	203 dpi	300 dpi	600 dpi
Max Print Speed	16 ips (406.4 mm/s)	12 ips (304.8 mm/s)	6 ips (152.4 mm/s)
Max Print Width	4.09" (104 mm)	4.16" (105.7 mm)	4.16" (105.6 mm)
Max Print Length	196" (5000 mm)		
MPU	64-bit, quad Arm® Cortex®-A53 core, maximum operating frequency 1.8 GHz		
GPU	GC NanoUltra 3D (1 shader) & GC320 2D OpenGL ES 2.0		
Memory	2GB DDR4 RAM, 8GB Managed NAND Flash		
HEAT™ Level ①	I		
Open Architecture Engine	OX Script: A Python-based automation engine for industrial printers - enabling direct device control, smart MES/ERP integration, and cloud-ready workflows.		
Signature Features & Configuration Method	Signature Features: Account Management, Label Formats Management, Remaining Amount of Media & Ribbon Monitor, Media Feed Calibration		
	Configuration Method: UI and POSTEK APP		
RFID Encoder	Supports UHF EPC Gen 2, ISO 18000-6C protocols (Only available for RFID models)		
Media Roll	TX Exp: Media Width: 0.39" ~ 4.56" (10 mm ~ 116 mm) TX Exp (Max): Media Width: 0.39" ~ 4.72" (10 mm ~ 120 mm) Maximum Outer Diameter: 8" (203.2 mm) Inner Diameter: 1.5" (38 mm) / 3" (76.2 mm)		
Minimum Label Length	Tear-off: 0.2" (5 mm)		
	Cutter: A150S/A400S/A400P: 0.79" (20 mm) HG400S: 0.59" (15 mm)		
	Peel-off : 0.47" (12 mm), with label peeled-off sensor 0.2" (5 mm), w/o label peeled-off sensor ** Peeler is optional, only for TX Exp (Max)*		
Media Thickness②	Regular Barcode Label/ RFID Label: 0.0024" ~ 0.012" (0.06 ~ 0.305 mm), including liner		
	Mount-on-Metal RFID Label: 0.063" (1.6 mm) max., including liner		
Ribbon	Maximum Ribbon Length: 1968' (600 m) Maximum Ribbon Width: 4.56" (116 mm) Maximum Outer Diameter: 3.31" (84 mm) Inner Diameter: 1" (25.4 mm) Ink side: both In and Out		
Media Sensor	Upper reflective: detects black marks on print side Lower reflective: detects black marks on back side Transmissive: detects gaps, notches, holes		
Fonts	Five built-in dot matrix fonts, which include Basic Latin and Latin-1 Supplement character sets. Two built-in scalable fonts. One supports Latin, Greek and Cyrillic scripts, and the other is a GB2312 Chinese character set specifically. User downloadable TrueType fonts.		

Barcode Types	1D Barcodes: Code 39, Code 93, Code 128/subset A,B,C, Codabar, Interleave 2 of 5, UPC A/E 2 and 5 add-on, EAN-13/8/128, UCC-128, GS1-128, etc. 2D Barcodes: MaxiCode, PDF417, Data Matrix, QR Code, GS1 DataMatrix, GS1 QR Code, CS Code, etc.
Interfaces	RS-232 Serial, 10/100/1000Mbps Adaptive Ethernet, USB DEVICE 2.0, USB HOST, General I/O Signal Interface (Optional)
LCD Display	4.5″ LCD Capacitive Touchscreen
Power Source	100 ~ 240 VAC, 50/60 Hz
Weight	TX Exp: 33.07 lbs (15 kgs) TX Exp (Max): 41.45 lbs (18.8 kgs)
Dimensions	TX Exp: W 11.3″ (286 mm) × D 17.6″ (448 mm) × H 10.7″ (271 mm) TX Exp (Max): W 11.3″ (286 mm) × D 17.6″ (448 mm) × H 11.4″ (289 mm)
Operating Environment	Temperature: 32°F ~ +104°F (0°C ~ 40°C) Relative humidity: 5% ~ 90% non-condensing Maximum Altitude: 5000 m
Storage Environment	Temperature: -40°F ~ +140°F (-40°C ~ 60°C) Relative humidity: 5% ~ 90% non-condensing

① HEAT™, or Heating Equilibrium Adaptive Tuning, is a POSTEK designed and developed cutting-edge technology that sets the benchmark for heat management in thermal printing. Printers equipped with HEAT™ have significant improvements in their printout clarity and print speed. The HEAT™ level represents the fineness of the heating uniformity with level I being the finest.

② For Mount-on-Metal RFID tags, the flexibility of the tag and whether or not to use fillings to bridge the gaps between tags can affect print quality and even encoding success rate. It is strongly recommended to test the tags on this POSTEK printer before purchasing.

Optional Configuration

SmartTagVerify*	External-mount module (Only available for RFID models)				
Visual Verifier*	The visual verifier is available in the following configurations, which can be selected based on needs and budget: · VG 4 Scan: CIS camera continuous scanning, barcode data verification. · VG 4 Static: Industrial camera static capture, label height up to 3 inches, barcode data verification, label integrity inspection. · VG 4 Pro: Industrial camera continuous capture, unlimited label height, barcode data verification, label integrity inspection.				
Automatic Peeler* (Only for Max version printers)	A dedicated set of peeling rollers, an internal liner rewinder, and a label peeled-off sensor. Liner Take-up Roll: Maximum Outer Diameter: 5.51″ (140 mm)				
Wireless Module*	WIFI IEEE 802.11a/b/g/n/ac/ax, 2.4/5.8GHz, Bluetooth 5.0				
Cutters	Type	Rotary Cutter			Guillotine Cutter
	Model	A150S	A400S	A400P	HG400S
	Max. Cut Width	120 mm	120 mm	120	120 mm
	Min. Cut Length	20 mm	20 mm	20 mm	15 mm
	Cut Speed	0.8 sec/cut	0.8 sec/cut	0.15 sec/cut	0.15 sec/cut
	Cut Thickness (white cardboard paper)	0.20 mm	0.20~0.35 mm	0.35 mm	0.40 mm
	Cuts Guaranteed	600,000	600,000	600,000	600,000

* Factory dependent.



POSTEK

RUGGED PARTS, DURABLE MACHINES

POSTEK ELECTRONICS CO., LTD.

Wisdom Plaza, Block B, Tower 2, 18 Floor
Qiaoxiang Road, Nanshan District
518052 Shenzhen, Guangdong, China

Hotline: (+86) 755 83240988 ext.818
Email: overseas@postek.com.cn
Website: www.postekchina.com

POSTEK US INC.

13809 Research Blvd, STE 500
Austin Texas 78750
United States

Email: Jarvis.lu@postekus.com
Website: www.postekus.com